Lesson 33 - Why We Should Not Eat Animal Products In Any Form

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1. Animal Products

A. Any part of the body of a once-living creature.
B. Any substance or product produced by or within a living creature.
C. Any product produced from or containing any part of, the body or products of a living, or once-living, creature.

A. 1. Muscle Meats
   2. Organ Meats
   3. Other Body Parts
   4. Mixtures Containing Any of Above

B. 1. Honey and Royal Jelly
   2. Eggs
   3. Milk, Cream

C. 1. Butter
   2. Buttermilk
   3. Sour Cream
   4. Clabber
   5. Kefir

6. Cheese
7. Rennet
8. Yogurt
9. Whey
10. Ice Cream
11. Gelatin
12. Fish Liver Oil
13. Dessicated Liver
14. Bone Meal
15. Bone Marrow
16. Other Supplements Produced from Animal Sources
17. Lard

1.1 Animal Products Are Neither Safe Nor Desirable

"The unfitness of certain substances for assimilative purposes is manifested by the anaphylactic symptoms that so frequently follow their use. Alimentary anaphylactic phenomena are confined almost exclusively to substances of animal origin. The more closely these animal substances resemble the human body in composition, the more frequently do they give rise to these phenomena. Thus flesh is the worst offender, eggs come second and milk is last." (Herbert M. Shelton, *The Hygienic System, Volume II*, p. 168)

The above eloquent indictment of animal products lays the groundwork for this lesson. Flesh foods have been dealt with in Lesson 32. Honey, eggs, dairy products, and various animal-food byproducts will be considered in this lesson.

Hereward Carrington (*The Natural Food of Man*, p. 167) says that such animal products are open to all those objections which might be urged against the use of flesh foods, only in a lesser degree. He says, however, that the objections to these products are less serious and that they are certainly to be preferred to meat—but he still concludes that there are weighty objections to their use.

We shall examine these objections in depth, so that the student may judge for himself whether, in truth, animal products in any form should be considered a safe or desirable part of the food program. I believe you cannot help but agree with Dr. Shelton that "Little can be said in defense of the use of animal foods except in instances of dire necessity."

1.2 Animal Products and Cancer

Viktoras Kulvinskas (*Survival Into The 21st Century*, p. 228) says that though the high protein requirement for cancer growth comes, as a rule, from the dietary intake of animal carcass, it is also caused by eggs and dairy products.

He says that Dr. Szepsenwal showed in experiments with laboratory animals that the incidence of lymphatic cancer and lung adenocarcinoma is as high in the mice receiving egg yolk as those receiving egg white. "In the animals of both groups the lymphoid system of the abdominal cavity is the first to be affected ... the adenocarcinomas of the lungs, whether caused by egg white or egg yolk, are very extensive, frequently destroying the whole lungs." (Szepsenwal, J.; J. Proc. Exp. Biol. and Med., 1957, V96, 332 and P.S.E.B.M. Feb. 20, 1963, V112, P1073)

Dr. White found, through experiments with laboratory animals, that high dietary intake of cystine (a non-essential amino acid found in high concentration in animal protein) produced incidences of almost 100% of mammary tumors. (White, F.R. and White, J.; J. Nat. Cancer lnst., 4:413 (1944)

Dr. Babson observed that on a diet high in casein protein (the major source being the dairy products), some forms of cancer grew five times as fast as other forms. (Babson, A.L., Cancer Res., 14:89, 1954)

2. Honey And Royal Jelly

The honeybee's greatest usefulness is the pollination of endless numbers of crops. This occurs while the worker bee is engaged in its natural function of gathering nectar from flowers for the production of honey.

The nectar of the flowers is ingested by the worker bees and converted, by the addition of their own secretions, in special sacs in their esophagi, to the sweet, sticky substance we call honey.

This is regurgitated into the cells of the combs in the hives (built of beeswax by specialized worker bees), where it is aged and stored for future use—to feed the larvae and for subsistence in winter.

Bee honey is a complex substance, containing at least 181 known components. (*Honey, A Comprehensive Survey*, Edited by Eva Crane, MSc. PhD., p. 206)

Bee honey is composed chiefly of the simple sugars fructose (levulose), glucose (dextrose) and water; it also contains some more complex sugars (such as oligosaccharides and polysaccharides), some essential oils, several enzymes, various animal ferments (especially oxydase—oxydizing ferment) and acids. Honey also contains insignificant amounts of protein (amino acids and other protein constituents), vitamins and minerals.

Glucose crystallizes out of honey on standing at room temperature, leaving an uncrystallized layer of dissolved fructose. The fructose layer in crystallized honey ferments readily at temperatures of sixty degrees Fahrenheit or higher. Fermented honey is used in the production of honey wine or mead.

Honey to be marketed is usually heated by special processes to about 150 degrees Fahrenheit to dissolve the crystals, and is then poured into containers sealed against crystallization.

Bee honey is highly concentrated and stimulating, and is needed by the bees as fuel for their highly stressful and brief lives. Honey is an excellent natural normal substance for bees. Those who rob the bees to divert its use to humans are supplying an unnecessary and harmful substance. The popular belief that honey is a perfectly safe sweet for general and habitual use is a delusion.

Honey contains many acids which are injurious to humans. The sugar in honey is no less dangerous than any other sugars, refined or otherwise. The manite acid in honey renders its combinations with other foods even more injurious than ordinary cane sugar. (Dr. Shelton, *The Hygienic System, Volume II*, p. 168)

Honey is harmful to the digestion, the teeth and the nervous system. Honey, which is intended as a stimulant for bees, is also highly stimulating (and damaging) to humans.

The use of honey also causes an excess secretion of mucus. People with gastric or intestinal ulcers, or catarrhal conditions, should never use honey—neither should nervous and sensitive people succumb to its gustatory appeal—but they may have to learn the hard way.

The Hartbargers (*Eating for the Eighties*, p. 164) say that honey should not be fed to children. They say, "Many babies have trouble digesting honey and it has been shown to be a cause of botulism in infants. The Center for Disease Control in Atlanta recommends that honey not be given to infants one year old or younger."

Extravagant claims have been made for honey as a miracle cure. Various experiments have indicated antibiotic properties, which would, of course, also destroy friendly bacteria (such as those which aid in the digestion of food, as well as those which aid in the synthesization of Vitamin B-12).

These experiments and others for the treatment of burns and wounds, respiratory infections, digestive diseases, and malfunctions of the heart, are recounted in *Honey, A Comprehensive Survey*, pp. 260-263,

concluding, "In general, the use of honey is less likely to harm a patient than most other preparations, and on many occasions it has proved beneficial." This might be termed "damning it with faint praise," and is from the chapter on "The Biological Properties of Honey," written by a group of authors.

The actual nutritional value of honey is minimal, especially when compared to its potential for harm. Honey is poor in mineral elements and in vitamins. It has, about the same composition of minerals as white sugar, and is almost as devitalizing.

The clarifying process to make honey less cloudy removes thirty-five to fifty percent of the original vitamin content. More vitamins and minerals are lost by evaporation when the honey comes in contact with oxygen. Honey contains only insignificant (trace) amounts of iron, and not enough B vitamins for its own metabolism, and, when consumed by humans, robs the body of B vitamins and alkaline minerals.

At one point in *Honey, A Comprehensive Survey*, it is said that "all the knowledge and scientific research in this book endorses the 'goodness' of honey as a food for man." The book contains 608 pages and sells for $52.50. Yet all that is really said in favor of honey as a food for humans has to do with its palatability, and the opinion that it is more "easily digested" and more natural than carbohydrates like, for example, sucrose. While stating that honey has valuable nutrients, it is admitted, perforce, that the amounts are so minute as to be insignificant, and concludes, "This need not surprise us, for honey is primarily a food for bees, not man."

These quotations are from the discussion of the "Nutritive Value of Honey," in the chapter on the "Biological Properties of Honey," written by a group of authors (pp. 265-266).

Dr. Jonathan M. White, Jr., on page 199 of the chapter on the "Composition of Honey," also says that "the levels of various vitamins are so low that they have no real nutritional significance."

2.1 Identity of the Acids in Honey

Much of the knowledge of honey acids has been obtained since the early 1950s. Formic acid was once thought to be *the* acid of honey, and it was thought that the last action of the bees in ripening honey was to add formic acid to preserve the honey.

It is now known that gluconic acid is present in honey in much greater amounts than all other acids; it is produced by the action of an enzyme in honey upon the dextrose in it. Except for gluconic acid, the sources of the various honey acids are not known. Many of them may already be present in the nectar.

Analysts seeking to measure the total amounts of the various acids in honey have encountered difficulties, leading to uncertainties or errors in the measurements. Consequently, information as to these proportions is not available.

Since I heard Dr. Alec Burton refer to some twenty or so acids in honey, many of which are harmful to humans, I have wondered which ones they are, and decided to research the subject and pass the information on to others who may desire it.

The following acids have been positively identified in honey:

acetic	gluconic	oxalic
butyric	lactic	pyroglutamic
citric	maleic	succinic
formic	malic	

The following acids have been identified in honey without rigorous proof of their identity, and it is considered that they are probably present:

- glycollic
- a-ketoglutaric
- pyruvic
- tartaric
- 2- or 3-phosphoglyceric
- a- or B-glycerophosphate
- glucose-6-phosphate

(from *Honey, A Comprehensive Survey*, Chapter Five; "Composition of Honey," by Dr. Jonathan M. White, Jr., pp. 169-170)

Dr. Shelton also refers to manite acid in honey. (*The Hygienic System, Volume II*, p. 168)

"Honey is not tested for pesticide residue levels, and no tolerance level has been established for pesticides in honey. Neither has there been a tolerance set for the many residual antibiotics which remain in honey, after bees are drugged, to enable them to function after they've been fed waste candy products (which incorporate dyes, colorings and other chemicals) to compensate for man's plundering of their hives." (Ida Honoroff, *Dr. Shelton's Hygienic Review*, March 1980)

Ida Honoroff also recounts an interview with Colonel Clair, president of Hawaii Bee Keepers Association, on radio station KPFP-FM in Southern California. Colonel Clair stated that all honey contains pesticide residues— "There'd be no way to avoid that from nectar collected from plants which have been sprayed by pesticides."

Of course, as explained in Lesson 32 ("Why We Should Not Eat Meat"), the pesticides are more concentrated in the honey than in the plants.

Colonel Clair feels that genetic failure among bees is the most dangerous threat of the modern practice of feeding them sugar and drugs, and various other practices, such as artificial insemination. The result is diseased bees, diseased honeycomb and diseased honey.

We don't need honey, but we do need the honeybees for pollination of our crops. Another impending disaster?

Most people should avoid concentrated sweets altogether, but dates, figs, raisins, dried bananas, etc., are much better adapted to human nutrition than a product manufactured by bees for their own use.

Dr. Alec Burton emphasizes the inadvisability of the use of honey. He related an experience he had with a terminal cancer patient, whom he had kept alive for a lengthy period by the use of a program of all-raw foods. The man was doing very well and was able to function and do some work. However, his weight was on the low side. His well-meaning relatives and friends, noting his too-slender appearance, urged him to take some high-caloried honey, to increase his weight. He ate the honey—and died.

"Now," Dr. Burton said, "I am not saying that honey causes cancer." He explained that this is simply an illustration of the fact that cancer patients can frequently be kept alive for long periods on a totally raw-food plant diet, and that *no deviations can be tolerated*. Honey, especially, with its many harmful acids, can be disastrous to such a patient.

Honey is not recommended for anyone's use. Its value is delusion, and its potential for harm is indisputable. Dr. Shelton does not recommend its use, but says that its vast potential for harm would be among those who are engaged in active outdoor work. Even for such people, it is almost impossible to find a food with which it can be favorably combined. If taken with fruits or grains, honey will cause fermentation. Honey also causes decomposition of protein foods, and the honey itself ferments from being held in the stomach long enough for the digestion of the protein. The least harmful combination, according to Dr. Shelton, is toasted bread. But he reiterates his warning against its use with any food.

Your best course would be to eliminate honey from your food program altogether—you don't need it as a sweetener if you are eating simple Hygienic foods. If you occasionally prepare a recipe that does require a sweetener, dates would serve a better purpose.

Dr. Vetrano says that the *occasional* use of honey will not do great harm—but it should not be used as part of the regular diet.

2.2 Royal Jelly

Royal Jelly is a highly nutritious (for bees) secretion of the pharyngeal glands of the honeybee, which is fed to the very young larvae in a colony, and to all queen larvae.

Obviously, this substance is subject to the same objections as those against honey. Royal Jelly is sold at high prices in health food stores as a "miraculous" and "nutritious" food for humans. Don't use it!

3. Eggs

Eggs are in the same category as flesh foods, since they are, of course, fowl in embryo. A fertilized egg is a fowl before it is born; an unfertilized egg is the product of a bird's sexual cycle.

Eggs from barnyard fowl (fertile eggs) are sometimes available in health food stores, and have some advantages over production-line eggs—but are hardly to be recommended as a food of optimal quality for humans. Even when the hens are allowed plenty of clean territory for running, adequate fresh, pure water, pure air and good grain—and cohabitation with the rooster—the resultant product (the egg) is apt to be less than optimal, even for non-vegetarians. The habits of the fowl are not clean— they will eat almost anything—eggs will sometimes taste of wild garlic which the hen has eaten.

On the other hand, production-line methods produce a particularly poor product, from the standpoint of nutrition and toxicity. Hens are fed arsenic to kill parasites and stimulate egg production.

About 95% of egg-laying hens are maintained in production plants. The routine conditions in egg production plants are certainly not conducive to producing eggs of high quality. Five fully grown hens in a twenty inch by twenty-four inch cage is routine in some hen batteries; some squeeze four hens into twelve inch by twelve inch cages. The hens cannot spread their wings or even turn around. Wire flooring often injures their feet, and hens have even "grown fast to their cages." (Victoria Moran, Ahimsa, April/June 1982, quoting from *Poultry Tribune*, February 1974)

Hens are de-beaked at one week and again at three to five months, to prevent featherpecking and cannibalism, brought on by the overcrowded conditions. Food and water are provided mechanically; conveyors remove eggs and waste. Fluorescent bulbs provide seventeen hours of artificial daylight to stimulate laying. The millions of eggs sold in supermarkets are the products of these "hen farms."

All eggs contain an excess of sulphur. Hereward Carrington (*The Natural Food of Man*, p. 173) says, "Persons who are subject to torpor of the liver would do well to refrain from the use of either eggs or butter; and those who have sound livers—and desire to keep them so—can take a hint."

Dr. Shelton, also, says that eggs should certainly never be eaten by one whose liver and kidneys are not in perfect condition. He says that children, invalids, inactive people and those inclined to constipation should especially avoid egg whites.

The raw albumen contains a toxic protein substance, avidin (a biotin antagonist). Biotin is one of the B-

complex vitamins. Avidin is inactivated by one minute of cooking.

Dr. Shelton says that raw egg whites produce in some stomachs almost deadly acids. He says that Vernon, Hetin and others have shown that raw egg white hinders the digestion of other substances.

"Bayliss, Professor of Physiology, University of London (*The Physiology of Food and Economy in Diet*) says that raw egg white contains some substance which, even in small amounts, hinders the action of the digestive fluids. Lemoine, a French authority, after careful study, says raw egg white contains a poison which damages the kidneys." (Dr. Shelton, *Volume II*, page 170)

Boxers, marathon runners and other athletes sometimes use whole raw eggs (blended with fruit juices) as "high-protein training food," and may give the impression that whole raw egg is an optimal food. You now know better!

Raw egg yolks are sometimes prescribed by Hygienic professionals as a temporary source of protein for people who are having digestive or other problems with the use of nuts as a protein source. Even though raw egg yolks are relatively innocuous and easily digested, their use should be confined to temporary emergency use, for many reasons (some already discussed and some additional factors still to be considered).

Dr. Virginia Vetrano (Dr. Shelton's Hygienic Review, February 1977, p. 136) says: "Taking a raw egg yolk in orange juice is not the best way to take eggs, if one is going to eat them. Eggs, being an animal food, decompose very rapidly if not digested soon. Taking them with an acid fruit such as oranges or orange juice, inhibits the secretion of gastric juice, necessary for normal digestion, and predisposes to putrefaction."

With further reference to the preoccupation of athletes with "extra protein," the following interesting comment appeared in a 1978 issue of the Journal of the American Medical Association. The Association's Department of Foods and Nutrition commented: "The ingestion of protein supplements by athletes who eat an otherwise well-balanced diet is of no use in body-building programs. Athletes need the same amount of protein foods as nonathletes. Protein does not increase strength. Indeed, it often takes greater energy to digest and metabolize the excess of protein. In addition, excess protein in the athlete can induce dehydration, loss of appetite, and diarrhea. Athletes DO have an increased requirement for *calories*."

In Lesson 32, in the discussion of salmonellosis, I mentioned that, if you open and eat a raw egg, there is the risk of bacteria from the outside of the shell contaminating the egg. (*Meat on the Menu*, Who Needs It? Raymond H. Woolsey)

Since some Hygienic professionals sometimes prescribe raw egg yolks as a temporary protein source for some debilitated individuals who have problems with nut proteins, I once experimented with their use (three yolks per week), but abruptly discontinued the experiment when they produced a goodly crop of hives—some on my face. I mentioned this experience in a previous lesson.

In view of this evidence, it would seem that it would be best to avoid the use of eggs altogether, if at all possible.

If, for any reason, it is desired to use eggs sparingly or temporarily, the following precautions should be borne in mind:

1. Egg yolks may be taken uncooked, preferably not in orange juice. If prescribed by a Hygienic professional, get his advice as to how to use them. In general, I believe it is recommended that they be taken alone.
2. Never use whole eggs uncooked, since the albumen is toxic.
3. If cooked eggs are ever used, they should be lightly cooked over low heat, preferably poached or coddled. A coddled egg is one that has been placed, in a covered pan, in water just below the boiling point (away from the heat source) for five minutes or so—long enough to slightly "set" the albumen.

4. If eggs are ever used, fertile eggs from a farmer or health food store are preferable to production line eggs. In addition to the use of arsenicals and the unspeakable conditions in the egg factories, which result in an unnatural and inferior product, production line eggs have also been considered objectionable on the grounds that they may have been kept in cold storage for long periods of time before they are sold. However, the executive vice president of the American Egg Board says that cold storage eggs are a thing of the past, that they go from hen to market rapidly, under well-controlled conditions, and that they are sprayed with oil to protect freshness. (*Better Nutrition*, June 1982, p. 65)

4. Dairy Products

4.1 Milk

All mammals take their mother's milk during infancy. After they are weaned, they are sustained by other foods—most humans, however, have been convinced that cow's milk is an ideal food for humans and should be used all through adult life. Recently, some medical men have been swinging away from this view, and blaming milk for a growing number of problems in children and adults.

There should be a transition period, during which a child eats other foods as well as nursing, but the time comes when milk is no longer needed. The use of dairy products by human adults is unique in the animal kingdom—man is the only animal that is never weaned—except, of course, for domesticated animals, who lap up saucers of milk.

The milk of each species is well adapted for the young of that species. Unpasteurized raw cow's milk is an ideal food for calves; it contains a growth factor intended for the maturing of a calf, but which causes excessive height in young humans, and complicated problems in adult humans, such as excess secretion of mucus, excess secretion of urine, constipation, diarrhea, bowel impaction, nausea, gas and discomfort, m increased blood pressure, edema, and numerous digestive and respiratory problems.

4.2 Milk for the Human Infant

Human milk is far superior to any other milk as food for the human infant. The chemical composition of cow's milk is different from that of human milk in many other important respects. Cow's milk is specifically adapted to the blood and chemical composition of the calf's body.

The rapid body growth and small brain of a calf require different nutritional elements than the human, whose body grows and matures slowly, who lives several times as long, and whose brain is the most rapidly growing and best-developed of all species.

Human milk contains lecithin, and an abundance of the amino acid taurine, both important to brain development. Cow's milk is deficient in both of these elements.

The milk of the nursing mother changes with the changing needs of the growing infant. Human milk is much lower in total protein than is cow's milk, and is sweeter and higher in carbohydrates. The types and amounts of fats, vitamins and minerals also are radically different.

In the preparation of the infant's formula, the cow's milk is usually diluted with water and sweetened to lower the excessive protein and provide supplementary carbohydrates.

The protein content of human milk is about one-third as much as in cow's milk, and is mostly albumin—

while the protein in cow's milk is mostly casein, which forms large, tough, dense, difficult-to-digest curds which are adapted to the four-stomach bovine digestive apparatus. Mother's milk forms very small, soft curds which are easily digested by the infant.

The following comparisons are listed in Composition of Foods, Agriculture Handbook No. 8:

	Human Milk U.S. Sample (100 grams)	Fluid Whole Cow's Milk (Pasteurized and Raw—3.7 per cent Fat) (100 grams)
Protein	1.1 grams	9.5 grams
Carbohydrate	3.5 grams	4.9 grams

Human milk contains much more (than any other milk) of the two amino acids, cystine and tryptophan, characteristics which render it superior for the human infant. Cow's milk is deficient in iodine, iron, phosphorus and manganese. The minerals in mother's milk are adequate for infants, but inadequate for adults.

Milk is splendid as the sole food for mammals during the period of their most rapid growth. A baby will ordinarily double his or her birth weight in 180 days with no other food.

Of course, mother's milk can be impaired by the diet of the mother. Many cases of colic (gas and constipation) in babies are "miraculously" cured when the mother stops eating eggs, meat and other animal foods.

If a mother does not have enough breast milk, she should give the child what she has and supplement it. The question is—with what? This question is of even greater importance, if it is not possible to nurse the infant at all.

It cannot be too strongly emphasized that the infant should, even at very great cost, be nursed during the initial period, for as long as possible. Breast milk contains hormones needed by the infant, and contains white blood cells which protect against infections, intestinal disorders and respiratory diseases; and this protection extends into later life. The yellowish, watery fluid (colostrum) secreted from the breast during the first few days of nursing has an especially vital protective role.

Bottle-fed babies are much more susceptible to allergies. They contract the so-called "contagious" diseases more than twice as often, and enlarged tonsils and adenoids are much more common among them.

Repeated evidence from Europe during the wars in 1871, 1914 and 1917, revealed that when no cow's milk was available, and the infants had to be breast-fed, the infant death rate dropped.

The nursing period of mammals varies according to the rate of their growth and maturity. Human growth is slowest and the nursing period should be longest. A baby should be nursed for at least nine months, and, if possible, up to two years, or even longer. Of course, the mother must eat correctly, exercise, and rest adequately. Green salads are of prime importance for the production of a good milk supply, and the nursing mother will need more protein. She should also slightly increase her consumption of distilled water to maintain her liquid requirement. Fresh, juicy, uncooked fruits will also provide additional liquid.

When the mother does not have sufficient milk, or when it becomes impossible for the mother to continue nursing, what is the best substitute? The old-fashioned "wet nurse" idea was the best—a substitute nursing mother.

Many vegans and Hygienists maintain that adequate infant nutrition can be maintained on vegetable

milks, such as soya, sesame, and nut or seed milks. These vegetable milks are also sometimes used when a baby is "allergic" to, or unable to digest or utilize animal milk.

However, it may be necessary to use animal milk for some babies. Dr. Alec Burton says that, if human milk is not obtainable, infants should have the milk of another animal, because they must have galactose, which is found in combination with glucose in milk sugar, and just does not exist in the plant kingdom. In this case, goat's milk is sometimes used, since it forms a smaller curd than cow's milk, and is therefore easier to digest, and does not have the excess growth factor. Also, it is somewhat easier to obtain goat's milk that is not pasteurized, from a goat that has not been fed drugs and antibiotics. Goat's milk is, of course, subject to some of the same objections as cow's milk.

It has been pointed out that practically no breast-fed infants die of "sudden infant death syndrome." Authors Geoffrey Marks and William K. Beatty note that telling evidence has been accumulated implicating a deficiency of selenium or Vitamin E in this syndrome. Human milk contains up to *six times* as much selenium and twice as much Vitamin E as does cow's milk, which contains even less when diluted for infant feeding. Marks and Beatty caution that this cannot be remedied by supplementation, because the tiny tract amounts of selenium required (or safe) leave no room for experimentation. (*The Precious Metals of Medicine*, Charles Scribner's Sons, New York, 1975)

In 1979, the nutrition committees of the American Academy of Pediatrics and the Canadian Pediatric Society issued a joint report, strongly favoring breastfeeding. They said that there are some things in Nature that simply cannot be duplicated, and gave the following reasons:

1. The fats obtained from human milk are more easily absorbed by the human infant than those found in cow's milk.
2. The cholesterol in mother's milk serves a valuable purpose in the development of the infant.
3. The protein in mother's milk is a near-perfect source for infants—much better than cow's milk.
4. Infants are able to absorb about 50% more iron from mother's milk than from cow's milk. Infants on cow's milk for extended periods are at risk for iron deficiency, whereas full-term breast-fed infants receive sufficient iron from mother's milk until their birth weight has tripled.
5. Mother's milk also provides important protective factors not available from any formula. Two substances, lactoferrin and transferrin, prevent potentially harmful bacteria from growing in the intestinal tract. In addition, the infant is provided with important immunities by a fluid (colostrom) secreted by the breast during the first few days following birth. Finally, breast milk contains lysozymes, enzymes that attack and break down harmful bacteria, as well as a substance known as the "bifidus factor," which promotes the growth of protective bacteria in the infant's body.

Pertinent to the subject of errors and abuses in the feeding of infants is an article by Rep. Morgan F. Murphy (D-III.) "Formulas Harm Third World Infants," (*Clearwater Sun*, p. 9A, 10/2/79): "About two million babies in the world's developing nations are suffering from what pediatricians call 'bottle baby disease.' It's largely the result of an aggressive marketing campaign waged by infant formula manufacturers who want to increase sales in Third World countries.

"As a result, many mothers have needlessly given up breastfeeding to feed their babies an infant formula that is often diluted or contaminated, causing malnutrition, intestinal infection, pneumonia, dehydration —and sometimes death."

The article explains that, since birth rates in the Western World have been declining, the manufacturers decided to expand into new markets. Drug companies, eager to increase profits through diversification, have acquired infant-formula companies. The companies found they could take advantage of increases in population in developing nations.

They promote their product through radio, newspapers, magazine and billboard advertisements, distribution of free samples, and offering gifts or money to health professionals to induce them to promote infant formula. These Third World countries now spend more than six hundred million dollars a

year on infant formula, about twice what the U.S. spends.

This has produced serious problems. The formula is very costly for those with low incomes, causing mothers to dilute the formula to make it last longer. Result: malnutrition. Because of lack of refrigeration and other conveniences and knowledge, the formula often becomes contaminated and the child gets sick or dies.

The aggressive and misleading promotion of the product causes many women to believe that breastfeeding is less than adequate. "Cruelly, in the time it takes to use up the free samples, a woman's secretion of milk may have become difficult or stopped altogether."

The article concludes: "The promotion of infant formula raises doubts in nursing mothers, whose anxiety then inhibits the flow of their milk. In point of fact, as noted by the organization Clergy and Laity Concerned, a mother's milk is free, always available, sterile, the right temperature and contains all the nutrition a child needs in the first four to six months of life."

4.3 Modern Methods of Milk Production

Present-day methods of producing milk involve the threat of milk from unhealthy animals, poor sanitation, poor methods of pasteurizing and handling bulk supplies, and drugs, including hormones and antibiotics, in practically all dairy products.

A cow normally would secrete enough milk to nurse her calf, about two hundred pounds of milk a year. Today she is allowed to nurse her calf for only three days, and has been developed into a milk machine, becoming pregnant often enough (a calf every year) to continue the secretion of milk, and fed and maintained for maximum milk production—up to 15,000 pounds of milk per year.

An Associated Press Report (printed in A.C. Press January 1, 1978) cites an article in the farm magazine, *Wallace's Farmer*, to the effect that dairy cows are now becoming "flabby, heart-disease prone" due to the unnatural living conditions on dairy farms; "confined to inactive lives of eating, drinking, resting, being milked, and producing one calf a year."

Researchers of the United States Dairy Association have come up with a "jogging program" consisting of a mechanical exerciser that keeps the animals walking at a controlled pace, while moving tailgates push the cows around a fenced ring. Some of the cows cooperate, some don't. (Ahimsa, Oct/Dec. 1977)

I am not sure whether the predominating factor in the preceding paragraph is its "humor," its pathos, or its asininity. Would it be too simple to just turn the cows out to pasture, letting them walk back and forth from the barn to the pasture, and letting them walk, run, jog, play, or just be— and relieve them of at least part of their confinement and *slavery*—and improve their health, in the process?

Overfeeding of cows on rich fare to constantly produce unnaturally large quantities of milk, forced long periods of milking, and the other circumstances of their slavery, are a drain on the organism. The cows become weakened and diseased, and they are then given massive doses of antibiotics, some of which can be found in the milk.

Dr. Alec Burton (Dr. Shelton's Hygienic Review, July 1974, p. 253) says that milk has become more of an excretion of the cow than a secretion, that many drugs, including antibiotics, are present in the milk, and that practically all milk today contains traces of penicillin.

Milk also contains concentrations of pollutants from the environment, such as DDT and radioactive Strontium 90.

"University of Wisconsin researchers Philip Bushnell and Hector De Luca have found that the lactose in milk facilitates the absorption of lead, which is, of course, toxic. Increased lactose consumption led to increased lead absorption and more lead in tissues studied." (*Vegetarian Living*, published by The Vegetarian Association of America)

Vegetarian Living also notes, "Researchers at the Wellcome Research Laboratories in Research Triangle

Park, North Carolina, have found two to five hundred nanograms of morphine in milk they tested. Pedro Cuatrecasas and Eli Hazum made the findings, based on immunological, pharmacological, biological and chemical test series."

4.4 Pasteurized Milk

Whatever virtues raw milk may possess are seriously damaged by pasteurization. Heating the milk makes it even more difficult to digest and causes chemical and physical changes that destroy much of whatever nutritional value would have been available in the raw milk. The casein is coagulated and toughened, the vitamin and mineral components are spoiled and made unavailable to the body, and the lactic acid bacilli (beneficial intestinal flora) are destroyed.

In addition to pasteurization, milk is subjected to other processes, all of which impair its value; It is homogenized (so that the cream cannot be separated from the milk), sterilized and otherwise treated to render it "safe." Even though it is illegal, milk is regularly adulterated, and the adulteration is never put on the label. This is a violation of the Pure Food and Drug Act, but the dairy industry remains free of persecution. (Dr. Shelton, *Volume II, The Hygienic System*, p. 174)

Dr. Shelton says, "One of the most common adulterations put into milk are the so-called 'alkalinizers.' These are used most during the summer months to mask the taste of the milk produced by the growth of the bacilli in it. This enables the milk industry to sell old milk as 'fresh milk'."

4.5 Raw Milk From Healthy Cows (?)

Unpasteurized milk is illegal in most states. Certified raw milk is available in some states. Dr. Shelton says (*Volume II*, p. 174), "Certified milk, produced by cows kept in sunless barns and fed on dry goods, is an especially inadequate food."

Raw milk from Farmer Brown's cow, Betsy, who grazes on an unsprayed pasture, and where immaculate standards of cleanliness are maintained, is probably the best obtainable.

But many people (children and adults) experience quick reactions when *any* milk is consumed. Excess secretion of mucus is quickly initiated, causing frequent colds, tonsillitis, bronchitis and asthma. Milk has also been a factor in the development of coronary artery disease. These and other problems (such as constipation, diarrhea, tetany) are inherent in the liberal use of the milk itself (even raw milk) and many people who use only small amounts of milk still suffer respiratory and other problems, which often, miraculously disappear when milk is eliminate in the diet.

Many people lack the enzymes lactase and rennin, necessary for the digestion of milk. Some adults who have used milk regularly all their lives may still be able to secrete these enzymes to some extent, and demonstrate no overt reactions when they drink milk (which does not, per se, prove that the milk is an optimal food for that person).

Lactose (milk sugar) comprises about 40% of the calories in breast milk, and about 30% in cow's milk. Lactase catalyzes the conversion of lactose, a complex carbohydrate, into the simple sugars, glucose and galactose, which can then be utilized by the body. Humans who are deficient in this enzyme have difficulty in utilizing dairy products, especially milk. They may suffer pain, nausea, vomiting, diarrhea and other problems.

This deficiency is very common in Japanese and Chinese people, and also exists in many blacks. Many children of all races have this deficiency, and handle milk poorly.

E.L. Cole, Jr., M.D. (*St. Petersburg Independent*, May 20, 1974) said, "Since so many children are allergic to milk, and because of the fact that 10% of the white population and 40% of the black population have a lactase deficiency, this raises the question of whether or not it should be eliminated from the school lunch program."

Neil Solomon, M.D., in a more recent article (*Clearwater Sun*, June 25, 1981) said that "from 60% to 90% of black adults and members of other ethnic groups are lactose intolerant, compared with 5% to 15% of white adults." He said that there are relative degrees of lactase deficiency, and the majority of persons are able to tolerate some small amounts of milk without becoming ill.

Rennin is a milk-coagulating (curding) enzyme which is secreted by glands in the stomach, and it is important in the digestive processes of infants because it prevents the too-rapid passage of milk from the stomach.

Rennin tends to diminish at about two years of age, when the baby has a mouth full of teeth, and when the salivary glands of the mouth begin the secretion of the enzyme ptyalin (alpha amylase) which is necessary for starch digestion. Intestinal starch-digesting enzymes also begin secretion at this time. These phenomena appear to signal the time for weaning and feeding solid foods. Rennin usually continues to be secreted in decreasing amounts for the next three or four years, for a transition period from the milk of infancy to solid food.

Dr. Shelton (Dr. Shelton's Hygienic Review, August 1969, p. 275) says, "Even in early childhood, when there is still a supply of rennin in the stomach, taking flesh, eggs or other protein at the same meal with milk will tend to result in the secretion of a highly acid gastric juice that will destroy or inactivate the rennin and interfere with or retard milk digestion; hence the wisdom of our rule: *Take milk alone or let it alone*."

People who lack rennin or lactase may be able to tolerate dairy products which have already been clabbered or coagulated—such as clabber, yogurt, buttermilk or cheese— but have problems when they try to drink milk. Dr. Shelton says that Berg and others have noted that adult organisms handle sour milk more efficiently, the characteristics of the milk having been greatly altered by the ferment of the bacteria. (Dr. Shelton's *Hygienic Review*, August 1969, p. 276)

The thymus gland, which also has a function involved in the digestion of dairy products, reaches its maximum development during early childhood, and usually degenerates and becomes vestigial in adults.

The protein and fat of cow's milk is so constituted that the enzymes of the human digestive tract fail to digest it completely, so that some of the elements are absorbed intact and cause trouble. (Dr. Burton, Dr. Shelton's *Hygienic Review*, July 1974, p. 253)

Sylvester Graham, early pioneer in Natural Hygiene, found that physical workers of various kinds—farmers, mechanics, etc., were more vigorous and active and had more endurance if they ate only plant foods and used no milk.

"In the earlier editions of his 'The Newer Knowledge of Nutrition,' before he became a highly paid consultant on nutrition to the National Dairy Products Co., Professor E. V. McCollum stressed the fact that milk is not an essential in the diet of man. He pointed out that the inhabitants of southern Asia have no herds and do not drink milk. Their diet is made up of rice, soy beans, sweet potatoes, bamboo sprouts, and other vegetables. According to Professor McCollum, these people are exceptional for the development of their physique and endurance, while their capacity for work is also exceptional. They escape skeletal defects in childhood and have the finest teeth of any people in the world. This is a sharp and favorable contrast with milk-drinking peoples. The professor found it expedient to delete these facts from all editions of his work published subsequent to his becoming consultant to National Dairy." (Dr. Shelton, *Volume II*, p. 172)

The claim that milk is a protective food and that it will help bone development and prevent tooth decay has been demonstrated to be a fallacy. We are told that milk is a major source of calcium and if we don't drink milk, our teeth will fall out and our bones collapse, and most people buy these ideas, hook, line and sinker.

4.6 The Truth About Calcium

"The calcium in cow's milk is of too crude a nature to be easily assimilated by the more delicate, subtle human organism. Frequently, the coarser calcium attracts and absorbs the finer calcium in the human cells, robbing them of what little they had." (Ian Rose, *Faith, Love and Seaweed*, quoted in "Feeding Vegan Babies," Freya Dinshah, Ahimsa, Nov.-Dec. 1974)

This may be one explanation for the fact that tetany (muscle cramps) frequently follows the ingestion of milk. Some years ago, I drank three glasses of "good, raw milk" in one day, and experienced horrible muscle cramps in my hands, feet and legs.

My sister was a milk drinker, drinking several glasses a day all through her life, yet she lost all her teeth when she was in her early fifties. Although she drank pasteurized milk, this result was inherent in the milk itself (even raw), since the coarser calcium of the cow's milk robs body calcium.

Calcium is abundant in plant foods and a good Hygienic diet provides many times the required amount of calcium, in better form, and more readily utilized by the human organism.

The late Henry C. Sherman, Ph.D., Sc.D., formerly professor of Chemistry, Columbia University (*Essentials of Nutrition*), said that the dark green leaves are a prime source of calcium, *well utilized in nutrition*.

"Calcium is not Cowcium," says Vegetarian Living (published by the Vegetarian Association of America). There are many nonanimal foods in common use among Hygienists, each of which is as rich in calcium as cow's milk, if not richer. Some of these are sunflower seeds, dried figs, pistachio nuts, Brazil nuts, filberts, almonds, kale and other greens; and the calcium in these plant foods is readily available to the human organism, without stress and threat.

Natural sunlight (Vitamin D) is vital to calcium absorption. Foods high in oxalic acid (such as spinach, chard, beet greens, chocolate, coffee) interfere with the absorption of calcium. Wheat bran (a fragmented food) inhibits the absorption of calcium. Such unnaturally large amounts of fiber can impair the body's ability to absorb calcium and other important minerals. Natural sources of fiber (with few exceptions, some of which have already been mentioned in earlier lessons) don't interfere with the assimilation of calcium and other nutrients. (Harland, Barbara and Hecht, Annabel, "Grandma Called It' Roughage"—FDA Consumers Publication 78-2087, U.S. Department of Health, Education and Welfare, July/August 1977)

Be sure to note and differentiate among the various dark green leaves. Dark, leafy green vegetables contain considerable amounts of calcium, but they also contain varying amounts of oxalic acid. During food digestion, oxalic acid combines with calcium and forms an insoluble compound, calcium oxalate, so that the calcium *passes out of the body without being absorbed*. Those greens which contain large amounts of oxalic acid are therefore poor sources of calcium, since most or all of their calcium is lost to the body. They may even rob the body stores of calcium obtained from other foods. The "good guys" are romaine, buttercrunch and leaf lettuce; kale, broccoli, Brussels sprouts, cabbage and collard. These vegetables contain significant amounts of calcium and negligible amounts of oxalic acid. In kale, broccoli and collard, calcium exceeds oxalic acid by a ratio of forty-two to one. Beet greens, spinach and Swiss chard have up to eight times as much oxalic acid as calcium. (*Prevention*, June 1980, p. 40)

It is worthwhile to take the time and effort to understand the importance of calcium, and its sources. Calcium is needed for proper bone and cartilage formation, for proper blood clotting, for muscle functioning, for hormone activation, for tissue formation. Calcium influences capillary permeability.

Calcium deficiency can cause headaches, heart palpitation, listlessness, sleeplessness, and affects nerve function and thought processes. Adequate calcium supplies can help to keep cholesterol levels in the normal range. Calcium activates numerous enzyme systems and normalizes the contraction and relaxation of the heart. It is essential in the maintenance of the delicate acid-alkaline balance.

During the years of growth, 99% of the available calcium is utilized in the formation of bones and teeth.

Subsequently, extra supplies of calcium and other minerals are stored in the bones and drawn upon in emergencies for balancing the body chemistry. A small percentage of the body's calcium is found in body fluids and tissues.

June M. Wiles, whose research on this subject is summarized in her excellent article, "Good Nutrition," (*Independent Press*, September 10, 1975) says, "It is unfortunate that a majority of our medical practitioners, when seeing "too much" calcium in blood studies will take the patient off calcium instead of seeking to find why an excess is present. There is hardly such a thing as "too much," especially the way we Americans eat."

She says that it is probable that a *deficiency* of calcium may exist, because the body is incapable of retaining it. We must understand that other nutrients influence the absorption, utilization and stability of calcium. Calcium will be rejected by the body if Vitamins A, D, C, magnesium, phosphorus and dietary protein are absent or deficient.

Ms. Wiles says, "If more physicians would check first for these deficiencies before withdrawing calcium, I dare say the rate of individual recovery would increase 100%."

A January 1981 Prevention article (p. 65) gives an interesting table of the nutritional value of four types of lettuce:

(100 grams or one serving)	Vit. A. (IU)	Vit.C (mg.)	Calcium (mg.)	Iron (mg.)
Butterhead lettuce (Boston, Bibb)	970	8	35	2.0
Romaine lettuce	1,900	18	68	1.4
Crisphead lettuce (Iceberg head lettuce)	330	6	20	0.5
Loose-leaf lettuce	1,900	68	18	1.4

They are nearly equal in other vitamins, minerals, protein and carbohydrates.

"Peas and mung beans contain calmodulin, a protein which works with calcium in such vital processes as activating enzymes in the red blood cells, skeletal muscles and the brain, as well as controlling muscle and nerve action, blood clotting, cell mortifying and cell membrane functions." (*Vegetarian Living*)

As we have so often emphasized, those who utilize an intelligently planned Hygienic diet, consisting mostly of whole, raw foods, need have no concern about deficiencies of any nutritional elements.

4.7 Don't Drink Milk

Carrington says, (*The Natural Food of Man*, p. 170), "Even if an animal is perfectly healthy, the milk partakes of the nature and general character and composition of the animal's body," and while this may not be actually diseased, it is doubtless in a more or less depraved condition—as are practically all domesticated animals, particularly the cow—during the confined period of winter. And the milk, being a secretion, naturally takes on the conditions of the body of the animal—as would any other secretion.

Carrington says, "Indeed, Professor L.B. Arnold, an excellent authority on all dairy matters, says, 'Milk is the scavenger of the cow's body.'"

Cow's milk is usually used by adults as a beverage—it is not a beverage, but a food. In its raw state, unpolluted and unprocessed, it is an excellent food for calves.

It is emphatically not recommended for human consumption, especially adult humans.

4.8 A New Use For Milk

David Reuben, M.D. (*Everything You Always Wanted To Know About Nutrition*, pp. 161-162) says: "Someone in Washington, D.C., once got the bright idea that black African tribesmen would eat better if we sent them some of our powdered skim milk. The Africans gratefully accepted the wonderful powdered skim milk from their American benefactors—they accepted tons of it, in fact. They mixed it with water and tried to drink it. They got sick. They tried to drink it again. They got sicker. They stopped drinking it.

"But they were poor people, accustomed to making the best of a hard existence. The powdered skim milk....did not go to waste....That particular tribe has the whitest mud huts of any tribe anywhere. Each day little black boys dip their brushes in fabulously expensive high-protein skim milk and carefully whitewash the brown mud walls of the family dwelling."

Vegetarian Living says, "Humans who have not had milk as part of their hereditary diets do not have this inherited ability to deal with such an unnatural diet, and are lactose-intolerant. Most blacks, Jews, Southern Europeans and Orientals, as well as many Latin-Americans, are lactose-intolerant. Powdered milk sent as food aid to Latin America ended up being used to whitewash the houses there."

4.9 Cream and Butter

Cream is essentially an animal fat, containing very little of the protein and other elements of milk. If consumed in large quantities, it would, in some respects, be even more injurious than milk. But, taken in very limited quantities, as it usually is, it is probably much less harmful than fats from the bodies of slaughtered animals. It is, of course, subject to most of the same objections as milk.

Butter is also an animal fat which is to be preferred to fats from the bodies of animals. Consumed in limited quantities, it is generally not extremely harmful. Again, it is subject to many of the same objections as milk.

Some Hygienists who are not on totally raw food diets use limited amounts of unsalted butter—and a few may also use some cream. Both cream and butter are burdensome to the digestion, and cause an excess secretion of mucus. Use should be sparing—*or nil*.

4.10 Clabber, Kefir, Buttermilk, Sour Cream, Cheese

These are subject to many of the objections given for milk. As previously indicated, some adults are better able to tolerate "sour milk" which has been coagulated or acted upon by the ferment of bacteria. The question is: Should these fermented foods be used, or should they be considered "spoiled" or "rotten" milk? And is there a difference between naturally soured milk and milk soured by the introduction of a culture?

Raw milk contains natural lactic acid bacteria which, if left alone at room temperature, will grow and sour the milk. It is not always successful, however, since fluctuating temperatures may prevent proper clabbering (resulting in an odoriferous, unpleasant product). Most homemade clabber is made by introducing a culture, and commercial products such as sour cream, buttermilk and cheese are, of course, cultured.

Kefir is a slightly effervescent acidulous beverage of low alcoholic content made chiefly in southern Russia of cow's milk that is fermented by means of kefir grains. A kefir grain is a small mass resembling a tiny cauliflower, occurring in kefir, containing casein and other milk solids, I together with the yeasts and lactobacilli that cause the characteristic kefir fermentation, and serving as a starter to induce this fermentation when introduced into fresh milk.

Kefir may be said to resemble clabber or yogurt. It is a dairy product, and subject to the same objections as all dairy products, except that it, like other clabbered products, may be better tolerated by adults than milk. It is also subject to the same objections as all fermented products.

Years ago, a friend gave me a kefir starter, and I made it a number of times. I found it somewhat unsatisfactory, since the grains must be lifted from the sour milk and saved for the next batch. The process of removing the grains broke up the custardy consistency into a messy, unappetizing product.

We also did not care much for the taste. I was rather relieved when the starter was lost when we moved to Florida.

When we ate some meals at Dr. Esser's fasting retreat in 1967, he served clabber, sour cream, butter and cheese (sparingly). The clabber was homemade, using commercial sour cream as a starter; the butter was unsalted; and the cheese was an excellent-tasting ricotta. I don't know what their practice is now. I have heard Dr. Esser say, at American Natural Hygiene Society Conventions, that he considers cheese to be a useful supplementary source of protein.

Some Hygienists are convinced that limited amounts of cheese should not be ruled out as a supplementary source of protein (where needed or desired); cheese and butter are usually included in the food items available at the American Natural Hygiene Society Conventions, for those who desire these foods.

It is usually recommended that cheese (if used) should be one of the following:

First Choice: Homemade cottage cheese, unsalted, made from unpasteurized milk.

Second Choice: Unsalted cheese, available in health food stores, made from unpasteurized milk, using vegetable rennet.

Third Choice: Ricotta cheese or cottage cheese marked 100% natural and containing no preservatives (we hope it's true), available in many supermarkets.

Fourth Choice: Unprocessed cheddar or other mild cheeses marked 100% natural, or with labels which do not list any additives (although that does not always guarantee it is free of additives). Read the labels.

The last two groups would presumably all be made of pasteurized milk, and would also contain some salt. Occasionally, unsalted cheeses are available in supermarkets.

4.11 Rennet

This substance, from the stomach of a newborn calf, is used in the processing of most commercial cheese. Sometimes rennet is obtained from the stomach of other newborn animals (e.g. hogs).

Some companies produce rennet less cheeses, which are made with vegetable coagulants. These cheeses are usually available in health food stores. Not all varieties of cheese can be produced with the vegetable coagulants. It is my understanding that it is not possible to produce the large holes in Swiss cheese unless the animal rennet is used.

4.12 Yogurt

I did not include yogurt with the other fermented dairy products because of some special comments that are pertinent to it alone. It is, obviously, also subject to the same objections given for other dairy products (unfermented and fermented), with the same stipulation that adults are better able to tolerate products which have already been coagulated.

Lactobacillus acidophilus bacteria, lactobacillus bifidus bacteria, and coli bacteria are normally present in the digestive tract of humans. They are sometimes called "friendly" or "beneficial" intestinal flora, and are necessary for human symbiosis and the proper absorption and utilization of foods. These natural intestinal flora can be adversely affected (or destroyed) by taking antibiotics.

There has been some evidence that using yogurt cultures for prolonged periods can also adversely affect the natural intestinal flora, or impair the body's own ability to foster the development of such natural friendly bacteria. One research team at Johns Hopkins Hospital even discovered a relationship to cataracts.

Nutrition researcher Gordon F. Fraser, B.Sc. ("The Yogurt Scare Is For Real," *Let's Live Magazine*, August 1970) says, "Most commercial yogurts contain harmful bacteria, of other than human origin, called bulgaricus bacillus; these die out in the human intestinal tract, and do a great deal of harm to the system before dying."

He says that this culture dominates and destroys the beneficial, necessary intestinal flora which help to utilize food particles, keep down pathogenic germs, stimulate peristalsis, detoxify and create a soft, smooth stool. Their main function is to aid in the nourishment of the cells and speed up the utilization of food.

Fraser maintains that negative reactions do not occur if the correct culture is used, provided it is not perverted in some way—by mixing with other cultures, or by the use of artificial additives, flavors, chemicals, etc. He says, "There is available in health food stores the correct and helpful bulgaricus culture which has not been altered by such conditions." It is a liquid containing a natural live culture of lactobacillus acidophilus, the correct lactobacillus bulgaricus, lactobacillus caucasius, lactic acid and yeast in milk whey, all of which help to maintain a healthy intestinal flora. He says that California's Aha Dena Certified Dairy and Walker-Gordon Certified Dairy in the Eastern United States use this product.

Does all this sound confusing to you? It certainly should make one uneasy about the regular use of any yogurt. Why risk inhibiting or impairing your natural intestinal flora? Why not, instead, stick to the Hygienic diet of all raw, or mostly raw, foods and have faith in your body's own ability to develop and foster its own beneficial intestinal flora?

4.13 Whey

Whey is the serum, or watery part, of milk (containing lactose, minerals and lactalbumin) which is separated from the thicker, or more coagulable, part (curd), especially in the process of making cheese.

The late J.I. Rodale (*Prevention* Magazine) repeatedly maintained that, while dairy products were harmful and "allergenic," the whey has none of the harmful properties, while retaining the "beneficial" characteristics of contributing to the body's beneficial intestinal flora. He therefore promoted and endorsed the use of whey tablets as a food supplement.

I tasted the whey which drips out of the clabber in making homemade cottage cheese, and did not find it to my liking. Whey is still subject to many of the objections against other dairy products. In addition, it is fragmented, and used to supply the body the beneficial intestinal flora which a healthy body should synthesize from a normal diet predominating in raw foods.

The regular use of whey as a food supplement may thus serve to inhibit the body's natural ability to provide these flora by making it unnecessary for the organism to function in this manner. Whey supplements are no more necessary than other supplements.

4.14 Ice Cream

This is the difficult one for many people. Should one take the Alcoholics Anonymous pledge of "not even once" or cater to our human frailty by occasionally indulging in homemade or so-called "natural" products? The best choice, obviously, is to divorce yourself completely from this temptress.

Regular commercial ice cream, with its twenty to thirty additives, is a particularly pernicious product. Some of the so-called "natural" ice creams may not be quite as bad, but, upon reading the labels, I found only one supermarket brand that contains no additives (except sugar and sometimes salt). At least the

law now requires listing these additives on the ice cream package—until recently it was not required.

Since the new law was passed, Farm Stores has discontinued advertising "natural" icecream.

Breyer's is the only supermarket ice cream I have found that actually contains no "additives" for most flavors (except sugar and salt). Their Buttered Almond Ice Cream actually contains only milk, cream, sugar, almonds, butter and salt. I believe I have seen some of their flavors that do not even contain butter or salt—just milk, cream, sugar and natural vanilla, fruit or nuts.

However, from the Hygienic point of view, the sugar is about as bad (or perhaps almost as bad) as the chemical emulsifiers and preservatives. And the milk and cream are subject to the same objections as for all dairy products.

Homemade ice cream may be a little better, because you can choose your own ingredients, such as unpasteurized cream or milk, and dates for sweetening, or even "ice cream" made without dairy products. But it is still a concoction to be avoided. There are some recipes for ice cream in Lesson 27—some using dairy products—and some without the use of dairy products.

Banana "ice cream"—made by freezing bananas and putting them through a Champion juicer (using the homogenizing blank)—is the best "substitute" for ice cream—not as good as eating bananas in their natural state, but not really harmful. It is as thick and "creamy" as ice cream.

If banana "ice cream" (other fruits may also be used) temporarily satisfies your nostalgia or craving for ice cream, it serves a good purpose. Hopefully you will eventually progress to the total elimination of such compromises from your food program.

5. Gelatin

Gelatin is made from the skin, tendons, ligaments and bones of animals. It is considered an animal protein food, except that it is deficient in one essential amino acid, tryptophane. It has sometimes been recommended to people with problem finger nails, who eventually find that it not only doesn't help their nails, it also causes other problems, due to an excess of an unnatural protein which is unbalanced and incomplete in an important and destructive way.

This product should never be used. If it is ever desired to produce a gelatinized dessert for a party, etc., vegetable gelatin (agar) may be used. Better yet, serve something other than a gelatin dessert.

6. Fish Liver Oil And Other Animal Food Supplements

(e.g. Dessicated Liver, Bone Meal, Bone Marrow, etc.)

The lesson on food supplements should eloquently refute the case for these substances. The items referred to above should be rejected both as animal products and as "pills" that promise much benefit, but deliver much harm.

I am including in this lesson Dr. Shelton's grave warning against the use of cod liver oil. Most modern food supplements include halibut liver oil instead (which is no better). Dale Alexander (*Arthritis and Common Sense*) touts cod liver oil as a universal panacea. I well remember forcing this repulsive grease on my own child, in the firm belief that it was beneficial and necessary (long before I knew about Natural Hygiene).

Dr. Shelton (Volume II, p. 175) says that Agduhr and Malmberg both came to the conclusion that cod liver oil is harmful to the heart, and is often responsible for death in children. Agduhr tested the oil on rabbits and Malmberg used children for his tests.

"Agduhr, working with Dr. N. Stenstron, proved definitely by animal experimentation that cod liver oil produces pathological changes in the heart muscle. F. Hendricksen concludes, from his tests, that large doses may produce general cell degeneration throughout the body.

C.W. Herlitz, I. Jundell and F. Wahlgre, after conducting an extensive and elaborate series of experiments, showed that doses quite comparable with those given to children in ordinary practice, can produce considerable degeneration in the heart muscles. These men feel that the public should be warned of these dangers as well as of the dangers from radiated milk."

I am also including the following information relative to bone meal. "C.S.P.I., the Center for Science in the Public Interest, in their news letter, 'Environment and Behavior,' has warned consumers, especially children and pregnant women, to avoid bone meal supplements because of lead contamination. Lead ingestion by humans has been connected to kidney failure, anemia and nervous system disorders. Unborn and young children could suffer from mental and behavioral problems from even low lead absorption levels; higher levels would be worse." (*Vegetarian Living*)

7. Lard

Lard is obtained by rendering the fatty tissue of the hog. It is difficult for me to discuss lard in a restrained manner, because I find it so disgusting. It is a product of the worst of the meat animals, and it is the worst of the cholesterol-abundant, saturated fats. Since it is an animal product, it is included in this discussion, though I can't believe any students of Natural Hygiene would ever consider its use. (Vegetarians who eat bean dishes in Mexican restaurants should be sure they weren't cooked in lard, since this is often the case).

8. None Is Best

I hope that, as a result of this lesson, you will decide never to use animal foods in any form. If you should elect to occasionally use certain animal products which are somewhat less pernicious than flesh foods, be aware that less is better and none is best.

9. Substitutes For Substitutes

In the transition to a Hygienic diet, some people become concerned and disturbed about finding "substitutes" for animal foods—not realizing that the animal foods are the "substitutes"—a perversion of man's natural diet. It is not necessary to search for substitutes that look, smell or taste like the animal-source foods. In fact, you can get into worse trouble by preoccupation with such substitutes.

If you eat lettuce, tomatoes, celery, cucumbers—if you eat bananas, grapes, oranges, melons—if you eat sunflower seeds, pecans, almonds, walnuts—you know exactly what you're getting. These foods might not be organically grown, they might be sprayed, but they are in their natural form, they have not been adulterated, or robbed of their enzymes or nutritive value.

But if you eat manufactured foods, you really don't know what you're getting. All kinds of imitation foods are offered to the public—imitation cheese, non-dairy whipped topping, imitation eggs, imitation butter. If you don't want to be "ripped off," read the labels. Of course, much of the time the labels don't tell the whole story. Better yet, use foods that have not been changed, and therefore *need no labels*.

Beatrice Trum Hunter reports that meat substitutes labeled "textured vegetable protein" are manufactured through a textile-like process, spinning soy bean fibers that can be shaped into meatlike products. The drastic alkali treatment to which they are subjected reduces the protein value, and an amino acid derivative is formed which is toxic. Levels of sodium are very high, calcium and zinc are less available, and the iron is bound up in a form of low availability to the body. *The resultant product is much worse than meat*. (Beatrice Trum Hunter, "The Great Nutrition Robbery," National Health Federation Bulletin, August 1979)

If you want to use soy beans, use sprouted soy beans or Mung beans, or soak dried soy beans overnight and cook them. If you want to eat something that looks and tastes like meat, you'd almost be better off just eating meat itself, bad as it is, because the synthetic product is much worse. But the best plan would be to avoid the meat and the imitation meat products.

9.1 A "Synthetic"Calf

In 1965 the United States Department of Agriculture proudly announced a milestone: the birth of a calf from a cow reared on a totally synthetic diet—urea, corn starch, corn sugar, wood pulp, minerals and vitamins. The calf appeared normal at birth, and during the first fifteen days of its life it gained twenty-nine pounds. On the sixteenth day, it was found lying dead in its pen. An extensive postmortem examination failed to show the cause of death.

10. Reject Animal Products For Optimal Health

No animal products are necessary for optimal health. No imitations of animal products are necessary for optimal health. No deficiencies will be experienced on a Hygienic diet. There is a great danger of deficiencies in a diet predominating in animal foods and deficient in fresh fruits and vegetables. A horror

story appeared in *Better Nutrition*, September 1977, about a woman who had six operations before it was discovered that all that was wrong was subclinical scurvy, due to a diet deficient in fresh fruits and vegetables.

Experience the delights of a plethora of varieties of fruits, and the delights of good health. The green leaves of Nature and the little sunflower seed kernels are treasure chests of nutrition.

A diet predominating in animal foods is admittedly poor in calcium unless milk and cheese are used. Yet the calcium of milk and cheese has been shown to be the frequent cause of *calcium depletion* instead of a source of supplying needed calcium to the body. (See previous quotation from Ian Rose, *Faith, Love and Seaweed*.) We have also learned from Professor of Chemistry Henry C. Sherman that the dark green leaves are an excellent source of calcium, *well utilized in nutrition*.

Dark green leaves, such as romaine, kale, etc. are almost incredibly rich in vitamins, minerals, enzymes and hormones, and they contain small amounts of easily-assimilated protein of high biological value. They are also rich in chlorophyll, which has a close molecular resemblance to hemoglobin, and is thus Nature's blood-building element for all plant-eaters, including humans.

And the sunflower seed! No food is complete in itself, but the sunflower seed comes very close. Refer to Lesson 24 for details about the bonanza of nutritional elements sunflower seeds provide, including calcium and quality protein.

Previous lessons have shown the tremendous variety of plant foods to choose from and enjoy. So why in the world do we need to eat animals or animal products, when Nature has provided so adequately for our needs?

11. Some Plants Also Should Be Rejected

It must not be forgotten that not all products or derivations of the plant kingdom are recommended for use as food: (cranberries, chard, beet greens, spinach - see Lessons on oxalic acid); coffee, tea, chocolate, etc. hail from the plant kingdom too; as do oleomargarine and other hard vegetable fats, all of which are *emphatically* not recommended.

It should also be remembered that foods or plant products should not be used as medicines. Your health food store's shelves abound with such "Miraculous cures" as apricot kernels, ginseng, etc. See the article "Plant Products and Effects" in this lesson.

When you abandon animal products, also bear in mind that you must judiciously select your foods from the plant kingdom, rejecting those which contain toxic substances in nutritionally significant amounts, and rejecting the use of foods or plants for medicinal or "curative" purposes. As you have learned, there are no "cures."

The only source of healing is your own body, and the only way you can help is by providing ideal conditions for the implementation of its own self-healing power. Such conditions are optimum during a fast, and the healing effect is consolidated and multiplied when the fast is followed by Hygienic eating and living.

12. Be The Best You Can Be

As health improves, the desire for animal foods, or imitations of (or substitutes for) animal foods will fade. The more knowledge one acquires, the less difficult the transition, and the more certain the attainment of the ultimate goal—to be the best you can be—the healthiest, the happiest, a fine example of Hygienic living.

13. Questions & Answers

Why do some Hygienic professionals continue to utilize egg yolks and cheese?

> It is a question of accepting a compromise solution to a difficult problem. Dr. Vetrano says (Dr. Shelton's *Hygienic Review*, January 1975, p. 116), "Most individuals have a difficult time adjusting to eating only nuts for protein and take an insufficient amount of protein at first." She is, of course, referring to people who are endeavoring to adjust to the Hygienic food program. She suggests adding green vegetables to the diet, since they contain small amounts of protein of high biological value.
>
> Dr. Vetrano also says (Dr. Shelton's *Hygienic Review*, November 1974, p. 55), "The strict vegetarian diet is best for most people. There are occasional sick people with gastrointestinal problems who must temporarily be placed on milk (milk products—clabber or cheese), if they cannot take a fast of sufficient length for complete healing."
>
> When Hygienic professionals suggest the use of egg yolks or cheese, it is usually with the hope and intention of providing supplementary protein to those individuals who are not yet able to accept, digest or assimilate an adequate supply of protein from the plant kingdom.

Did the American Indians have a source of animal milk?

> No. Indian children were usually weaned at about four years of age, and never again had milk. Cows were introduced into New England in 1624, but were seldom used for their milk at that time. "Cows were seldom milked at this time, being raised principally for their hides, secondarily for meat, and only incidentally for milk." (*Social Forces in American History*, A.M. Simons), (quoted by Dr. Shelton, *Volume II*, p. 172)

What is the difference between Natural Hygiene and veganism?

> A strictly Natural Hygiene food program is a vegan diet—that is, foods from the plant kingdom only. However, in actual practice, it is my impression that those who are known as vegans usually use grains (including whole grain bread) to a greater extent than do Natural Hygienists, and use more cooked food.

Is there any Hygienic objection to the use of prepared soya milk fortified with Vitamin B-12?

Prepared soya milk is a manufactured product, quite far removed from the soy bean as it grows. The Vitamin B-12 used in this product is "synthetic" and non-animal, though it is made by the same bacterial process as occurs in the bodies of humans and other total-vegetarian animals. If you have misgivings about having enough Vitamin B-12, the product mentioned would be less objectionable than the Vitamin B-12 from animal sources (liver extract).

However, Dr. Vetrano firmly believes that it is not necessary to use such artificial methods. She has repeatedly seen Vitamin B-12 problems disappear due to fasting and a Hygienic program of living and eating.

What is the purpose of emulsifiers in foods? Food additives worry me, and I don't really understand most of them.

To emulsify is to convert unmiscible substances into intimate mixtures (as oil and water). Emulsifiers, stabilizers and thickeners are the substances that make cream seem thick, keep the oil and vinegar in salad dressings from separating, and generally give a smooth, uniform texture to bread, bakery products, ice cream, puddings, shortenings. As Dr. Michael F. Jacobson points out in his book, *Eater's Digest*, some manufacturers use a recipe that automatically produces a food with satisfying texture and consistency. Other manufacturers of the same products rely on the above group of additives to cover up the fact that inferior ingredients or poor manufacturing practices make their product watery, lumpy or crystalline."

Hygienists need not be concerned about additives if they use whole plant foods, mostly raw, and avoid packaged foods.

Eating May Be Dangerous to Your Health, by Dr. Jacqueline Verrett and Jean Carper, gives details about various other additives in foods, and says that "there is overwhelming evidence that chemicals in foods can cause readily noticeable structural defects in the newborn, such twisted spines, shortened limbs, incomplete skulls, absence of eyes, cleft palates, web feet."

Article #1: Milk by Dr. Alec Burton

Hygienists have always adopted the position that milk is for infants, *mother's milk* that is, and that this is the normal practice among all mammals. During the initial phase of life it is the invariable practice of all mammalian species to take the milk of their mothers following which they are weaned, and spend the remainder of their life sustained by other foods. Man, on the contrary, teaches that milk is an ideal food, essentially cow's milk, and that after mother has performed her nursing, the cow should take over. In his feeding of infants, man has produced all types of formulae and means to usurp the natural habit of breast feeding. Even in his feeding of other mammals as pets man is wont to include milk in their diet.

Many women regard breast feeding as culturally regressive and primitive, something one should abandon as quickly as possible. They say it ruins their figure, that their breasts become atonic and pendulous. Such remarks are unfounded and other factors are responsible yet seldom are considered.

It is normal in nature for the mammal to breast feed into the post dentition period, that is well past the time the infant obtains a mouth full of teeth. Not just a few teeth but all teeth. Species of apes nurse for six or seven months although their first teeth have appeared at the end of three months. With mammals, there is a wide variation in the transition period, weaning taking place in many over a long period of time.

However, should milk constitute an integral part of the diet after weaning? Is milk a normal food for adults? The answer to both these questions is an unequivocal no!

Milk and milk products such as cheese and yogurt are viewed with suspicion by hygienists. Yogurt has possibly more to commend it than the other milk products and undoubtedly the changes wrought in the milk by the bacterial activity in producing the yogurt mitigate several of the unsatisfactory features of milk.

What are the unfavourable attributes of milk? Today milk is very much a processed product. It is pasteurized, homogenized, sterilized and otherwise treated to render it 'safe.' All these processes impair its value.

Historically it is revealed that the primitive animal of some time ago used to produce some 200 pounds of milk a year. The 'modern' cow may produce up to 15,000 pounds of milk a year, seventy five times as much. How has this influenced the quality? Milk has become more of an excretion of the cow than a secretion, and many drugs, including antibiotics are present; practically all milk today contains traces of penicillin.

There is also strong evidence to indicate that the adult gastric juice does not contain rennin, an enzyme which initiates the digestion of milk and which is abundant in the infant stomach. The protein and fat of milk is constituted in such a way that the enzymes of the human digestive tract fail to digest it adequately; some of the elements are absorbed intact and cause trouble. Milk also contains a high content of the chemical cholesterol and has been a factor in the development of coronary artery disease. Many people observe the quick action taken by the body when milk is consumed; much mucus is secreted or diseases associated with mucous membranes, asthma, sinusitis, bronchitis, etc. are aggravated. Milk is said to be a 'mucus forming' food and whilst I don't favour this description, I do suggest that its presence in the body may be the occasion for greater mucosal activity.

Milk is often considered a major source of the vital element Calcium: if we don't drink milk, our teeth will fall out and our bones collapse, or some such nonsense. Calcium is abundant in nature. Most of the foods, fruits, vegetables and nuts we recommend are excellent sources of calcium. It would have to be a very poor diet indeed that did not supply half a gram of calcium daily. A good hygienic diet would provide in excess of one gram.

Milk forms no part of the normal diet of man after the period of infancy and therefore our advice is—don't drink milk.

Article #2: The Digestion Of Milk

The first step in the digestion of milk is that of coagulating or curding. Milk may be made to curdle by adding an acid to it, such as lemon juice or some other acid fruit juice or by the hydrochloric acid of the stomach. Normally, the coagulation of milk in the stomach of a young mammal is done by an enzyme secreted by glands in the stomach and known as *rennin*. This enzyme is especially abundant in the

mucous lining of the stomach of young mammals and is extracted to be used in the manufacture of cheese.

The fifth edition of Harper's *Review of Physiological Chemistry* (p. 177, 1955) says of rennin: "This enzyme causes coagulation of milk, and is important in the digestive processes of infants because it prevents the rapid passage of milk from the stomach. In the presence of calcium rennin changes irreversibly the casein of milk to a paracasein which is then acted upon by pepsin. This enzyme is said to be absent from the stomach of adults."

Although, heretofore, it has been thought that the sole function of rennin is to coaugulate milk, it seems from Harper's statement that it may be a true digestive enzyme. It changes casein to paracasein so that pepsin can act upon it. Enzymes are specific in their action. Each enzyme acts upon a particular type of food and certain of these can act upon a starch or a protein only after other enzymes have first acted upon them and changed them from their original composition. Harper's statement seems to imply that pepsin acts upon paracasein rather than upon casein.

If this is the true relation of pepsin to the digestion of casein it means that rennin is essential to the efficient digestion of this protein. Rennin becomes of far greater importance in the digestion of milk than has heretofore been thought.

Rennin has been the subject of much controversy among physiologists. There was, first, the question: does rennin exist or does pepsin do the work ascribed to this enzyme? French and German investigators finally succeeded in establishing, to the satisfaction of everyone concerned, the existence of rennin as separate from pepsin. This did not end the controversy. While investigators now admit that rennin does, indeed, exist, many of them assert that it never exists in the human stomach, contending that it is found only in the fourth stomach of the calf.

In his *Advances in Enzymology* (London, 1954) Berridge defends the view that rennin is never found in the human stomach. He says that "Experiment tends to confirm the absence of rennin from human gastric juice." On the other hand, Eusterman and Balfour, in *The Stomach and the Duodenum* (1936) state that, "according to a number of investigators, rennin tends to disappear from the adult stomach." This statement implies that somebody, somewhere, found rennin in the human stomach, while its disappearance from the adult stomach has led to the suggestion that Berridge, who makes no distinction between infants and adults, made all of his experiments on adults.

In the second edition of his *Textbook of Medical Physiology* "1961" Arthur C. Guyton, M.D., says "rennin is found in the gastric juice of babies in large quantities, but it is present only to a very slight extent if at all in the gastric juice of adults. Also casein seems to be digested by babies much more easily than it is by adults, presumably because of rennin activity in the baby's stomach."

In the 1950 edition of *The Physiological Basis of Medical Practice,* Best and Taylor say that the rennin content of adults is "low" and provide us with the following data: "Rennin is especially abundant in the gastric mucosa of young animals, while pepsin is present in minimal amounts...The optimum pH for the action of rennin is between 5 and 6.5, and it is quite inactive at the pH of the gastric contents of the normal adult. In the infant, however, the pH of the gastric contents (5-6.5) is around the optimum for the action of this enzyme.

This indicates that the digestive processes required for the digestion of milk are somewhat different from those required for other foods and especially for other proteins. It is essential that the milk be coagulated and that the casein be converted into paracasein. I have seen two patients on a milk diet in which the milk did not coagulate, but was rushed along the digestive track into the colon and expelled in an unchanged fluid state. A glass of milk would be taken and in less than five minutes it would pass from the colon. Perhaps, in the absence of coagulation, milk would never be digested, but would pass through the digestive track too rapidly for the digestive enzymes to do their work.

In large numbers of other cases I have seen very large stools pass that were composed of large, hard milk curds that were white, apparently having undergone no digestion. Coagulation alone is not sufficient to

assure the digestion of milk. In a few of these cases, the curds have been so large and there have been so many of them that bowel impaction resulted. We frequently see white curds in the stools of infants, indicating that, although the milk coagulated, apparently in a normal manner, the curds were not digested. We assume in these cases that milk has been taken in excess of enzymic capacity.

As rennin is active in low acid medium and is inactivated by the normal gastric juice of the adult, and as it is concerned solely with the digestion of milk, it should come as no surprise to us to learn that it is not secreted by the adult stomach. In this connection it should be stressed that the acidity of the juice poured into the stomach is determined by the food eaten. Milk taken alone will occasion the flow of gastric juice that is low in acidity. Even in early childhood, when there is still a supply of rennin in the stomach, taking flesh, eggs or other protein at the same meal with milk will tend to result in the secretion of a highly acid gastric juice that will destroy or inactivate the rennin and interfere with or retard milk digestion, hence the wisdom of our rule: *take milk alone or let it alone*.

Rennin is apparently involved exclusively in the digestion of milk and tends to disappear from the gastric juice (is no longer secreted by the stomach) when the normal time to wean the child approaches. Some physiologists say that the concentration of rennin in the adult gastric juice is low; others say it isn't detectable. A two year old baby normally has a mouth full of teeth and can begin eating solid foods. At this age, also, the salivary glands begin the secretion of the enzyme ptyalin, which is necessary to starch digestion! Intestinal enzymes essential to starch digestion begin to be secreted at this time, also.

Thus, both the presence of adequate chewing apparatus and the secretion of digestive enzymes indicate that now is the time to begin the feeding of solid foods. In an article by a dentist, which appeared a few years ago, the author makes the statement that the baby should be weaned when the first two teeth are cut, as this signifies that solid foods are now to be taken. Of all persons a dentist should know that two teeth do not enable a baby to chew foods adequately. As these first two teeth are in the front (are biters and not chewers), the baby is certainly not physiologically or anatomically equipped for such chewing.

When the first teeth are through and the starch-splitting enzymes are being secreted, there starts a decline in the production of rennin; this is to say, its secretion begins to decline at the age of two. It continues to be secreted in decreasing amounts during the next three to four years, that is, during what I have called the *transition period* (see *Hygienic Care of Children*), in which the child is normally making the transition from the exclusive milk diet of infancy to the solid food diet of later life. During this *transition period* milk is normally taken. Should it surprise us to learn that when the child reaches the age at which it should normally be fully weaned its digestive glands cease to secrete the enzymes that are specially related to milk digestion?

One question comes to mind that I can find no data for an answer. It is this: Does the individual who continues to take milk regularly, from infancy into adulthood, continue to secrete rennin for a longer period of time than does the individual who is weaned at the normal weaning time of three to five years? This is to ask: Does the stomach continue to secrete rennin for an abnormally long period of time if the infant diet is persisted into late childhood and thereafter? Does the persistence of the need for rennin cause the body to continue to secrete it? If it does continue to secrete this digestive enzyme longer than normal, at what time of life does it disappear from the digestive juice of the stomach? If it continues to secrete rennin but in much decreased amounts, in those who continue to take milk, does this account for the fact that some physiologists find no trace of rennin in the subjects they use in their tests?

While the answer to this question (I have cut it up into several subordinate questions) may prove to be of no great practical value, it would prove interesting as well as instructive concerning the power of the body to adjust itself to varying circumstances of life, especially its power of the body to adapt its digestive juices and enzymes to the food eaten. Every such advance in knowledge of the chemistry of digestion provides us with added data to assist us in determining, not only the normal diet of man, but, also, and of equal importance, the normal mode of feeding.

Today's *nutritionists* wholly neglect all natural indications of the normal feeding of man. One food is as good as another and any food is equally as good at any time of life as at another, providing the

commercial manipulators of our foodstuffs can prepare it in a manner that it is acceptable to all ages. For example, although we know that during the first period of life after birth, even the lion cub does not eat flesh, our *nutritionists* do not hesitate to advocate flesh food for the human infant at a period of its development when the young carnivores of all kinds are still drawing their nutriment from the maternal font. Arrogance and egotism cause them to assume that they can improve the normal order of feeding. The results of their efforts are not encouraging.

While considerable confusion exists about rennin, there is one thing about which there is general agreement: namely, *the adult human stomach has no rennin*. Berg and others have shown that the adult organism does not use milk as efficiently as the rapidly growing organism and that, milk is base-forming in the infant and acid-forming in the adult. Berg attributed this to the more rapidly growing organism. May it not be, in light of the foregoing that the greater efficiency of the young animal in assimilating milk rests upon the fact that the infant and young child digest milk better? This suggestion derives support from the fact noted by Berg and others, that, adult organisms handle *sour* milk more efficiently, the characteristics of the milk having been greatly altered by the ferment action of bacteria.

Every indication of nature is contrary to the present dogma of the dairy industry and the medical profession that we must take our quart of milk every day so long as we live; that, even at the age of a hundred, we are not to be weaned. *Nature indicates that we are to be weaned at an early age*. In medical circles the tendency of the pendulum, just at present, is to swing violently and far in the opposite direction. In increasing numbers, medical men are blaming milk for a growing number of illnesses in children and adults. From being the all-good milk is rapidly becoming the all-bad. Certainly the assumption that invalids and convalescents, who have weak digestive powers, should be fed milk like an infant, because in their enfeebled condition they can handle milk better than other foods, is no longer tenable.

The *Hygienist* will see in all these facts a justification of Graham's condemnation of the use of milk and milk products by the adult and his observation that the use of milk by the adult makes him logy and lazy. Trall also pointed out that milk is not a normal part of the adult diet. Those of us who have had an extensive experience with the milk diet, formerly so strenuously advocated as a near-panacea, will discover in the foregoing facts at least partial explanation of the many troubles that the milk diet produced. Polyuria, constipation, diarrhea, bowel impaction, nausea, much gas and discomfort, increased blood pressure, a water-logged state of the tissues (edema), catarrh, indigestion and other troubles arising out of "the harmless practice of overfeeding on milk," necessitated all manners of manipulations to make it acceptable to patients.

From Dr. Shelton 's Hygienic Review, pages 274-276, Aug. 1969.

Article #3: Well, You Wanted To Know! by V.V. Vetrano, B.S., D.C.

I have noticed that honey is stimulating. After giving just a teaspoon to my baby, I noticed that she would not sleep the rest of the day.

> Your observations were correct. Honey is a stimulant. The excess of pure sugar and the formic acid it contains give honey its stimulating qualities.
>
> It is often used by athletes exactly for this purpose, although it is thought of as "quick energy," because the stimulating effect is not often understood.

Actually most people overeat for stimulating purposes, although they don't realize it. Any eating which is done in the absence of genuine hunger causes bodily activity which is not compensated for by an addition of nutriment, as most of it decomposes and poisons the body. There is a net energy loss which results in enervation.

Could you explain the value of honey mixed with lemon juice when fasting?

Those who fast with honey, lemon and water are not fasting. They are on a restricted diet and not a good one. If they abstain from all food except minute quantities of honey, lemon and water, thus lightening the burden of digestion, undoubtedly the body will benefit from the absence of heavy and indigestible foods. Most of the time the honey is taken in huge quantities, and these types of "fasts" are decidedly harmful. The persons on this diet are enabled to continue working, and therefore secure no rest. Very few benefits, if any, are the outcome.

The closer one comes to a genuine fast, with water only, the greater the results. Beneficial results are more frequent and more quickly achieved when truly fasting. There are no means known as excellent as the genuine fast for recovery of health.

One may hate the thought of fasting completely and try all sorts of trick diets or juice diets rather than enjoying a real fast. People lose a lot of weight with these eliminating diets, wasting their reserves, and actually putting themselves into conditions where they are unable to fast. Consequently, it may take them years to recover, whereas if they had not played around and if they had fasted immediately, they would have recovered in a short time.

Why is raw honey not good for you?

Honey has about the same composition of minerals as white sugar. It is almost as devitalizing as is white sugar. This is why the honey bee can live on white sugar but not on brown sugar. Brown sugar has more minerals and will clog up the delicate digestive system of the bee. Honey does not combine well with any food. If taken with fruits, which do not need it, it will cause fermentation. If taken with cereals, it does the same thing. Honey also causes decomposition of protein foods and ferments itself from having been held in the stomach as long as necessary for the completion of protein digestion. Honey also contains a preservative besides being an animal product. The bees add some of their own secretions to their honey, and in the process, they add a preservative which is toxic to man. Honey is an evaporated product and as such is not as nutritious as foods which have not been evaporated. Evaporated foods lose many minerals and vitamins during evaporation because these come in contact with the oxygen of the air and are rendered inorganic and non-usable to man. An occasional indulgence in honey will not be extremely detrimental to a person but to make a habit of eating honey daily will definitely rob the body of alkaline minerals and cause an excess of mucous.

Most people purchase light honeys and the mineral and vitamin content of these is extremely low. The darker honeys are more nutritious but less tasty. Another evil is that many honeys sold in the ordinary supermarket have been adulterated with corn syrup and white sugar. The clarifying process to make honey less cloudy removes up to 35 to 50 percent of the original vitamin content so the only "good" honey is the unclarified type sold in the hive. If you rely solely upon fresh fruits for your sugar, you are much better off.

Article #4: I Choose Survival

Viktoras Kulvinskas Own Case History From His Book "Survival Into The 21st Century" Pages 231, 234 and 235

While in college, I pushed myself to experience as much as possible. Born under the Piscean sky, of delicate constitution, this often proved disastrous. My living and eating habits were deadly.

By 1965, I knew all the nurses and doctors at the infirmary. They were very generous with tranquilizers, sleeping pills and pain relievers. These I added to fifteen cups of coffee and two packs of cigarettes per day, plenty of alcohol, chronic over-eating (by age 26 I was a chubby 190 pounds). In spite of many ailments, I always felt that one day I would be healthy.

A frightening experience shook me from this complacency. I was running up the stairs to a class on the fourth floor. Pain constricted my chest, but I made it to the office, poured a cup of black coffee and started to lecture.

My hands were shaking, perspiration poured from my face and armpits. I could not focus my thoughts. The pain in my heart was sharp. I did not think I would leave the room alive. By sheer force of will I managed to, finish the lecture.

Suddenly I knew what I must do without delay. I purchased some mild tea, fruits and vegetables. Then I drove to my log cabin, stopping to see my landlord. I told him that I was not well; that if I needed help, he would hear a continuous blast from a car horn which I would rig so it could be triggered from my bed. In that event, he should do whatever he thought necessary for me.

Walking up the two hundred foot incline to my cabin, I had to rest several times because of the sharp pain in my chest. My legs felt like lead. My varicose veins were screaming as if ready to burst.

I went to bed, but could not sleep. Since I was giving up coffee, cigarettes, alcohol, meat, milk and sleeping pills; I vaguely anticipated withdrawal symptoms. I lay clutching the car horn alarm for long distance companionship.

By 3 A.M., my nerves were on edge. I felt paralyzed inside my exhausted body. Headache, cramps and sweat came in waves. The palpitation of my heart increased. It started racing. I clocked it fearfully at 1:30, at which point I passed out.

I woke at 7 A.M., surprised and happy to be alive. I felt well enough to go back to school, but this was illusory; soon I felt exhausted. I went for a five-minute walk. All day, I wondered, what will the night be like? Will I survive it? Outside of knowing that drug withdrawal usually takes about three days, I had no knowledge of fasting, nor had I known anyone who had fasted.

For four days I experienced only minor discomfort, but the nights were sheer torture. However, as the days progressed, I began to feel more certain about my future. I increased the length of my daily walks and by the fifth day fell asleep at 11 p.m. from tiredness. By the seventh day I was running a few minutes and preparing the soil in the garden. I prayed, thankful to be alive to experience the simple delights of living.

During ensuing experimentation with diet, I discovered that my favorite food, milk (supposedly the perfect food) is a major source of colds and a factor in most respiratory disorders.

Pasteurized milk had been the staple in my diet in early childhood. For the first years of my life, doctors predicted my death as a matter of course. The milk diet (I know now) contributed to disorders of the respiratory and lymph system: tonsillitis, flu, pneumonia, diphtheria, colds, measles, mumps, bronchitis. On several occasions, I developed a high fever accompanied by large, running sores and boils (my body's attempt to cleanse itself). For two months I was semiconscious during a bout of typhoid fever.

Family love and strong will to live enabled me to survive.

Doctors continued to predict that I would never be healthy. They said my heart was permanently damaged by a triple dose of diphtheria toxoid given me by mistake. It would have killed a normal child, they said.

The poverty in post-war Germany made it difficult to obtain eggs, milk and meat. I spent much time barefoot in the woods gathering berries, mushrooms, nuts and wild fruit to contribute to our largely vegetarian diet. These simple foods restored my health.

During this detoxification period I had frequent colds and difficulty in eating. Once, within a 24 hour period, I developed a fever of 106 deg. F.; my skin became covered with sores. Because I fasted on liquids and rested, the condition disappeared within 3 days. *Much of the past dairy-induced mucus was eliminated though the skin in the form of boils which grew into the size of plums taking about 3 to 4 weeks, followed by opening and discharge of pus*. Within a period of a year I had 5 such events. This finished my basic body cleansing process.

Arriving in America at the age of ten, I embraced its luxuries: ice cream, milk, soda, white bread, hot dogs, candy, canned foods and processed bakery products. Within a year my skin became pimply, and I visited the dentist for the first time and developed severe colds. By the age of 16, I had varicose veins. At 19 I had a duodenal ulcer and tumors on my hand. I suffered migraine headache at least once a week. One of the outstanding characteristics of my diet was an excessive use of dairy products in the form of milk (up to three quarts a day), ice cream (on occasion I have eaten half a gallon), condensed milk, swiss cheese. I constantly spit sticky mucus.

Even after the healing crisis in my cabin, I continued this habit. Indigestion was sometimes so bad that I had to substitute lemonade for milk. In a few days my digestion would improve; then the desire to return to milk would become so strong I would repeat the pattern.

In the morning, after a few yoga postures, I would eat a breakfast of milk and cereal. Within minutes the great sense of well-being would vanish, replaced by a fuzzy head, runny nose and long congestion. Initially I supposed that I had not felt so well as I had thought. However, constant repetition convinced me that the culprit was *milk*.

I decided to resolve the problem. After three days of lemonade, I tried, on successive days, milk, yogurt, cottage cheese, dried milk, condensed milk. Every one of them induced the same reaction.

Though I was working very hard at this time as a computer programmer, my body was sick. I suffered from insomnia, migraine, stomach ulcer, varicose veins, indigestion.

It seemed time to retire (very appropriately, for at the age of 29 I showed all the signs of old age—my hair was graying and I was losing it quite rapidly).

The books of Ehret and Drs. Walker and Warmbrand gave me hope. I wrote to the authors and met some of them personally. Dr. Warmbrand put me on a vegetarian diet and made chiropractic adjustments. Immediately my digestion improved.

One doctor introduced me to Ann Wigmore. At the Mansion I became acquainted with grass juice and sprouts. The meal, served in famine proportions, looked wriggly; but it satisfied my appetite and agreed with my body. I read "Why Suffer." It opened visions of peace in the natural world and the power of the healing strength of grasses. I moved into the Mansion about one month later in May, 1968.

During the early stages of transition into vegetarianism, I had periodic bouts of cleansing reaction. Sweating was so profuse that I had to change my socks four times a day. On two occasions open sores discharged toxins stored for years. At times very irritable, I, found the best solution to be silence. Cramps were relieved by massage. Pain and headache responded to zone therapy.

With a cleansing diet my weight dropped, in a period of six months, from 160 to ninety-.five pounds. As my body started rebuilding I gained weight and now weigh 135 pounds.

Over the years, I have learned much about health and the needs of the body, but, like many busy people, I have neglected to pay enough attention to my bodily requirements.

One of the most important ingredients of health is adequate rest, which I have never obtained. Under city conditions, sunshine and pure air are not available. There never seems enough time for yoga, fasting, relaxation or meditation. My body has regenerated a good deal on the live food diet, in spite of these handicaps.

Now I have reached a time in life when the longing to be in the countryside is strong. Survival in the city is impossible. Next year, if the country is still intact, I plan to pursue the development of communities away from the city, in the north, the tropics and on islands, for surviving the crisis of this planet. We have little time left to prepare ourselves and our shelters.

However, survival into the 21st century is possible if we center our energies and apply the New Age teachings. This is the only task that has any meaning in our time.

Victor Kulvinskas

Article #5: Excerpts from "Compassion: The Ultimate Ethic" by Victoria Moran

"The new ways are solidly established. About 95% of egg-laying hens, virtually all...turkeys and half or more of beef cattle, dairy cows and pigs are maintained in some type of factory system."

Although factory farming has increased animal suffering tremendously and therefore adds fuel to the ethical vegetarian cause, it must be remembered that vegetarianism existed prior to mass-meat innovations, and its adherents eschew not just "farmed" flesh foods but also those obtained by hunting or fishing.

Up to this point, ethical vegetarians and vegans are of one mind. The difference comes in the vegan's seeing the entire animal-food and products network as a single entity:

"True, cowhide is only a byproduct of hamburger, but if cows were killed for their skins, would their flesh be any more morally edible so long as you did not wear leather?

"And what about the veal floating invisibly inside every glass of milk...There can be no quart of milk where there is not cutlet of veal. If your lips are white with milk, it is because someone's else's are red with blood."

The vegan is acutely aware that when most people stop eating meat, they increase their egg and cheese consumption markedly, "which means that any relief of suffering for the animals exists more in hope than in fact." I am personally a prime example of this: it was after becoming a vegetarian, not as a meat-eater, that I could go into ecstasy over a cheddar omelet. I probably know every eatery in Chicago's western suburbs that serves fluffy omelets. I even devised a system for protecting myself from the flat variety: a restaurant with linen napkins is sure to make fluffy omelets; with paper napkins, you take your chances! In any case, I presumed, as do most of the city-bred, that the cheese for my omelet came indirectly from a creature endowed by Nature with extraordinary abilities for milk manufacturing. It never occurred to me that the cow, like any mammalian female, produces milk for her young and must therefore periodically give birth to keep in lactation.

I shared with other urbanites the naive notion that only "surplus" milk is taken, after calves have nursed; but today almost no dairy cow is permitted to suckle her calf more than THREE DAYS, if that long.

According to the 1965 report of the Brambell Committee, a British governmental commission which conducted extensive research into food-animal treatment in the British Isles, "Separating the calf from the mother shortly after birth undoubtedly inflicts anguish on both. Cattle are highly intelligent, and attachment between the call and the mother is particularly strong."

A calf may go almost immediately for slaughter as veal; and the rennet from the stomach of a newborn calf is used in the processing of most commercial cheeses, rendering the product unsuitable for even lacto-vegetarian use in the strictest sense. (Some companies do now produce rennet-less cheeses which are made with vegetable coagulants; they usually must be purchased at health food stores and are more expensive than the mass-marketed brands.)

Early slaughter may be considered a more fortunate fate than that of the calves who go to white-veal units, where their 14-week lives are spent confined in wooden crates or stalls 22 inches wide by 4-1/2 feet long.

They are fed a liquid diet deliberately deficient in iron and certain vitamins, to promote the desired (anemic) paleness of flesh. Lack of roughage induces them to nibble at their crates and hair; and no bedding is provided, lest they eat it. (In deference to non-vegetarians concerned about this situation, we may state that many have boycotted veal; vegans applaud their efforts as far as they go, but urge them to go further.)

A few males may be reared for breeding, and those females deemed suitable for raising for dairying are fed milk substitutes to encourage their precocious development so that at 18 to 24 months the continuous cycle of pregnancies may begin.

These animals also will, of course, eventually be destined for the slaughterer's; and it is curious to note that life in a beef herd is (comparatively speaking) usually much more enjoyable than that endured by dairy cows and their offspring. The calves of beef cattle are "allowed to suckle...and graze in the fields until the time comes for the fattening pens and the slaughterhouse, but the surplus calves from the DAIRY herds are often sent to market when a week old (or less) and bought for rearing in intensive beef units...encouraged to overeat and...kept closely confined so that the minimum proportion of the food is used up for their bodily functions."

The vegan does not see this state of affairs as inconsequential or even as simply "unfortunate but necessary in a les than perfect world." He regards egg production similarly. Probably no creature outside the vivisection laboratories is subject to a more pitiable life at the hands of modern man, than is the chicken. Those idyllic barnyard scenes with hens pecking outside a chicken coop and the rooster serving as a colorful alarm clock for anyone within earshot still exist in very limited number, but the eggs from those family farms don't put a dent in the number of eggs consumers demand. To meet this, severely intensive systems have been devised since cage laying and indoor confinement began their rapid spread.

Originally, one-bird per cage was the rule. When production increased slightly with two birds and no decline was noted with three, four were tried; and now five fully grown hens in a 20x24-inch cage is routine in a mid-sized hen battery like the one I visited near Yorkville, Illinois. The 300,000 leghorns of "White Hen Farms" produce an average of 100,000 dozen eggs each week for a supermarket chain. (1,200,000 eggs, or four per week per hen. -ed.)

The "house" I was allowed to tour is an older 2-deck system (that is, 2 cages high), although White Hen's more modern units are triple-tier, and some large batteries—boasting up to one million hens, sometimes packed as tightly as NINE to a standard cage—have hen tenements (henements?) 4 or 5 rows high.

White Hen manager Walt Schultz, a personable businessman, explained that "Higher densities are being researched—more layers per square foot of building...It's the only way to be competitive. We have to increase capacity to be more efficient." And efficient it is: that particular operation runs with 26 full-time and 18 part-time employees, only 8 of whom are actually involved in maintaining the (three hundred thousand) birds.

Chickens for such plants are obtained from primary breeders who cage-rear pullets to laying age. The males are spotted by "sexers" at hatching. "Usually they go into the discard box, where they are left to die. Sometimes they are returned to the incubator; the heavy door is closed, the fan is shut off, and they suffocate."

At twenty weeks, birds ready to lay are transported to the egg farm where they will spend nine months in production. Feed and water are mechanically conveyed in, and eggs and wastes are similarly carried out. "Stimulighting" from fluorescent bulbs overhead provides 17 hours of artificial daylight believed to stimulate laying.

Overcrowded conditions—with a squeeze of 4 hens into cages of 1 square foot, reported at the Hainsworth Farm in Mt. Morris, New York—mean that the birds can not spread their wings (even one at a time!) and can scarcely turn around. Wire flooring often injures their feet, and hens have even "grown fast to their cages."

Under such stresses, the instinctive social structure and "pecking order" cannot develop; the conditions instead lead to what the industry calls "vices," notably feather-pecking and cannibalism. The British found the aforementioned "stimulighting" to aggravate this, so there dimming of lights—"twilighting"—is preferred.

On both sides of the Atlantic, birds are de-beaked at one week and again at 3 to 5 months when the beak grows back. This, according to the zoologist, F.W. Rogers Bram-bell in the previously quoted Brambell Report, "deprives the bird of...its most versatile member...between the horn and the bone is a thin layer of highly sensitive soft tissue, resembling the 'quick' of the human nail. The hot knife used in debeaking cut's through this complex of horn; bone and sensitive tissue, causing severe pain."

Every instinct—walking about, scratching the earth, dust-bathing, nest-building, mating, being part of a flock, experiencing the outdoors—is thwarted, and it all ends with the slaughterhouse and the soup can. ("Broilers" are not as yet raised this intensively on a large scale because the resultant sores and abscesses would diminish their market value.) Ironically, there are laws in both the United States and Great Britain stating that caged birds and animals be given adequate space for basic functions; in both nations' statutes, however, the loophole exists excluding those kept for FOOD from "equal rights under the law." (In other words, it is for songbirds, pets, those creatures who may normally be expected to elicit some feeling of kindness and sentiment in their owners anyway; it specifically excludes the very ones most in need of succor and most likely to be mistreated for profit. - ed.)

If "free-range" eggs were widely available (and reliably identifiable) at realistic prices, would those who are currently vegan use them? Some might (although they would then no longer be vegans) but most would still avoid them for the reasons early vegans did. To eat a fertilized egg is in effect to consume a chicken before it is born ("The ethics are borderline," I was told); and unfertilized eggs, the products of a bird's sexual cycle, can hardly be regarded as natural food for man.

Furthermore, vegans choose not to rear food animals themselves, and do not ask others to do this for them. Besides, there then must arise the insoluble dilemma of lacto-ovo vegetarianism: Given the demise of the meat industry, who is going to support hens past their prime, cows who can no longer produce milk, or the male chicks and calves who are now routinely killed at an early age? This is the question that vegan thought puts squarely before the vegetarians who, understandably, do not care for the question.

Reprinted from AHIMSA, April-June 1982

Article #6: What Happens To The Calf?

Few people realize that cows have to be subjected to yearly pregnancies so that the milk, cheese and cream that form a substantial part of the diet of the lacto-vegetarians and meat eaters may be produced. Many imagine that the cow is only relieved of her surplus milk after her calf has been satisfied, but hardly any cows in the dairy herds are allowed to suckle their calves for more than three days if at all. "Dairy calves are now nearly always reared by hand so that the milk which the cow provides can be sold." "Separating the calf from the mother shortly after birth undoubtedly inflicts anguish on both. Cattle are highly intelligent, and attachment between the calf and the mother is particularly strong." The calves, the inevitable byproduct of these continuous pregnancies, have five possible fates:—

1. They may go to the slaughter almost immediately—probably to provide the veal for veal and ham pies. The rennet used to make most commercial cheeses has to be taken from the stomach of a newly born calf.
2. They may be much more unfortunate for they may go to a white veal unit to spend the whole of their lives shut up in narrow Wooden crates. After the first few weeks they have no room even to turn around. They are fed on a special liquid diet designed to promote maximum growth in the minimum time and to keep their flesh "fashionably white." They are denied the roughage that their special digestive systems as ruminants require so they are often reduced to eating their own hair and nibbling their crates. They are given no bedding because their craving for solid food would make them eat it. The old practice of "bleeding" to whiten the flesh is now illegal but their iron take is kept to the minimum necessary for survival lest the meat should be tinged with red. Many emerge from their crates at the end of their fourteen weeks of existence suffering from stomach ulcers and abscesses, and with legs too shaky to support them as they are driven into the slaughter-house lorry. The Brambell Report says, "Calves at large are normally active and playful animals."
3. The home production of beef has gone up 50% since the war and "a recent survey has shown that 80% of the beef produced is a byproduct of the dairy industry." Calves from *beef* herds often have a comparatively tolerable fate, being allowed to suckle, run with their dams and graze in the fields until the time comes for the fattening pens and the slaughter-house, but the surplus calves from the *dairy* herbs are often sent to market when a week old (or less) and bought for rearing in intensive beef units. "Friesian calves are ideal for extremely intensive systems." Fed for twelve weeks on a largely cereal diet, they are encouraged to overeat and are kept closely confined so that the minimum proportion of the food is used up for their bodily functions. "There is a danger of poisoning due to overeating."
4. In these days of artificial insemination few calves are reared as bulls. A calf selected for such a fate may be allowed to suckle for a period. He will be carefully reared to produce the physique of a good sire with maximum fertility. Not that his physical powers, superb though they may be, will have much significance in the life designed for him. From ten to twelve months of age he may serve cows weekly, spending the rest of his time in solitary confinement. More likely these days he will be required to serve canvas "cows" and rubber tubes. The Ministry of Agriculture pamphlet on the care of bulls advocates an exercising yard attached to his shed with walls of a type he can see through for "boredom can produce viciousness" an admission this that animals have a mental and emotion life! Aged bulls are often castrated before they are shut up to fatten for the butcher.
5. If female the calves may be deemed suitable to rear as dairy cows. Dairy calves are removed as soon after birth as possible so that "the cow may settle down again in the herd," i.e. she is granted the minimum time to get over the strain of her frustrated pregnancy so that her milk as soon as possible can go to produce the all important profit. Fed on milk substitutes the calves

development is encouraged so that at eighteen to twenty-four months they can begin the cycle of continuous pregnancies. To quote from the "New Scientist," January 13th, 1972, "The modern dairy cow leads a hell of life. Each year she hopefully produces a calf which means that for nine months of the year she is pregnant. And for nine months of each year she is milked twice a day. For six months she is both pregnant and lactating."

Details of the ailments she can succumb to while meeting these demands make horrifying reading and so do the descriptions of the remedies used (see the various farming journals). Giving birth is often a prolonged and painful business for the cow to be rewarded only by separation from her baby. Cows often cry out and search for their calves for days after they are taken away. When after years of exploitation her milk yield drops then she is sent to the slaughter-house immediately. Worn out cow's meat is not popular in this country so they are commonly sent abroad for slaughter.

Comparatively lucky are the cows and calves that can live out their lives and suffer their butchering near to the place of their birth. For most there are long wearisome journeys, rough handling and standing in market places before being taken to slaughter-houses or new farms. The modern slaughter-houses are often miles from the farms on which the animals are reared, and it is not deemed "economic" to feed animals that are going to be slaughtered. The "humane" killers lessen the pain of the death blows but not the terror of the waiting and the violence of the handling that must precede their use.

And all this to produce food for humans that is not necessary! Human babies should have their mother's milk, and children and adults the solid food appropriate to their dentition and digestive systems. These can easily be selected from richly varied plant sources. For babies and children where necessary or desired, for invalids and those who still like to take milk, the Plantmilk Society, formed and served by men who were deeply moved by compassion for exploited animals, has promoted "Plamil" the milk of human kindness. Other nutritious plantmilks are also available. But the dairy industry is inseparable from the cruel exploitation and degradation of helpless, highly intelligent animals.

Article #7: 'No veal' campaign protests treatment of milk-fed calves by Michael J. Conlon

United Press International

WASHINGTON—The Humane Society of the United States is trying to discourage Americans from eating milk-fed veal because, it says, the animals are cruelly treated.

In a nationwide "no veal this meal" campaign, the society charges that most vealer calves raised for slaughter are isolated in narrow stalls and fed liquid diets low in iron "so the flesh stays 'fashionably white.' "

The campaign features ads in The New York Times and New York magazine as well as business-type cards that are being distributed to consumers to leave in restaurants where milk-fed veal is served.

"Dear Restaurateur," reads the card. "I enjoyed my meal here, but did not choose a veal entree because I believe milk-fed veal is inhumanely raised. I would prefer it if you did not offer this veal on your menu."

The group says most white veal that winds up on the nation's dinner tables "comes from calves raised in total confinement. Isolated in narrow stalls for their whole lives. Unable to turn around. Denied roughage."

The society said that need not be the case.

Veal raised in Britain, it said, are "housed in group pens, provided straw bedding, permitted to feed at will and to ruminate. Whether American veal producers will decide to adopt this system is uncertain."

It said one major domestic veal producer, Provimi Inc., had announced it will begin testing the British system as an alternative.

The society said it is urging support for legislation introduced by Rep. Ron Mottl, D-Ohio. His bill would establish a Farm Animal Husbandry Committee "to investigate how all farm animals—including veal calves—are raised under conditions of intensive confinement."

It said this is the first piece of legislation introduced in Congress to address directly the welfare of farm animals.

(Reprinted from the St. Petersburg Times, Jan. 7, 1982)

Article #8: Milk Surplus Continues To Grow As Price Climbs Ever Higher By Dan Carmichael

United Press International

Milk is the most political food in America, the product of an industry that enjoys legalized price fixing and a system financed by tax dollars to the tune of more than $2 billion a year.

Dairy executives wince every time the facts are repeated. Demand for dairy products is declining dramatically, production is skyrocketing and it costs U.S. taxpayers $250,000 each hour for their government to buy the surplus.

National milk supplies are 10 percent above demand and it costs $5,319 more every hour to store the surplus—or more than $127,000 a day.

The system has been called "a national scandal" by numerous critics, including President Reagan's budget director, David Stockman.

Even the critics, however, concede the odds are overwhelmingly against a major change. The dairy lobby has 1 heavy clout and last year alone contributed more than $2 million to congressional campaigns.

At the core of the system is a national network of milk cooperatives. The largest co-op—Associated Milk Producers Inc. (AMPI) of San Antonio, Texas—got caught in the Watergate scandal and its bagman carried $100,000 cash in an overnight case destined for Richard Nixon's illegal "dirty tricks" fund.

After AMPI made "campaign contributions" to Nixon, the president allowed milk price supports to rise by 37 cents per hundredweight, which gave the industry an additional $105 million to $500 million.

The system works extremely well—for everyone except consumers. It is difficult to reform because its complexity is beyond the economic understanding of many voters.

American taxpayers are buying about $2 billion of dairy products this year that no one wants. But the government is committed by law under an entitlement program to buy the surplus—no matter how much is overproduced deliberately.

The figures are mind-boggling.

Current stocks of dairy products—cheese, butter and dry milk—would fill a train stretching from New York to Washington.

As of April 30, 1982, the Commodity Credit Corporation had 411.7 million pounds of butter in storage, 550.5 million pounds of cheese and 917.7 pounds of nonfat dry milk. The annual storage cost: $46.6 million.

Governmental warehouses across the nation are overflowing. Nonfat dry milk fills 180 huge warehouses. Another 127 are full of butter and 171 are overflowing with cheese.

The figure for butter is lower than normal because the government recently sold 220 million pounds to New Zealand—a dairy nation—at bargain prices.

Surplus dairy supplies have been increasing since 1979, when government expenditures jumped from $46 million to $1 billion in 1980, to $1.9 billion in 1981 and $1.9 billion this fiscal year.

Some of the surplus is rotting. Some of it is being sold at major losses overseas—losses that taxpayers are financing. Some of it is being given away.

In December, President Reagan ordered 100 million pounds of cheese given away, cutting annual storage costs by more than $16.8 million.

The government has discussed several other options to reduce the cheese surplus, including dumping it in the ocean or burying it.

Currently, the government is buying about 9 percent of the total U.S. dairy production. The total in 1981 for milk and ice cream was a record $18.1 billion, 9 percent more than the record set in 1980.

An AMPI executive, Leland Anderson, said 10 percent of the nation's dairy farmers would go out of business if the price support system were abandoned.

"It'll cause a drastic drop in production to the point where we won't have adequate supplies," said Anderson, the assistant to the AMPI manager.

"We would have chaos in the industry," Anderson said. "Everybody would be trying to dump on the market to get sales and undercut everybody else. The product would become worthless.

"And the ultimate result is a certain number of people would go out of business," he said. "Are you going to put 10 percent of dairy farmers out of business and have them looking for jobs in the cities where there, are no jobs?"

Critics say this means taxpayers currently are supporting one out of 10 of America's dairymen.

Agriculture Secretary John Block is seeking congressional approval to give him flexibility to reduce government price supports to discourage even larger surpluses, but he has promised to make only a relatively small reduction.

Under current law, the support level is $13.10 per 100 pounds of milk. Block wants legislation giving him authority to set the support level—as opposed to specific minimum support levels mandated by law. He said he likely would not have to reduce the level lower than $12 per 100 pounds.

Time is short because the price support level is scheduled to increase again Oct. 1, despite the 9 percent overproduction.

Even before Block's recent announcement, the dairy industry was mobilizing to defeat the administration's plan which Block said would save taxpayers $700 million the first year.

The surplus milk program, designed to stabilize dairy prices, is regarded as the most expensive byproduct of America's complex array of agricultural support programs.

The prices that milk processors must pay to farmers are set by federal milk marketing orders. Premiums

are charged for drinking-type milk, which studies have indicated adds 2 to 8 cents per gallon to the retail price. The marketing order system makes price fixing legal.

Since the processor must pay the higher price anyway, the system keeps reconstituted milk uncompetitive with fresh milk—which, according to *Consumer Reports*, "is exactly what the dairy industry wants."

To give consumers a lower-cost alternative to fresh milk, the Community Nutrition Institute petitioned the USDA in 1979 to hold a hearing on pricing reconstituted milk lower than fresh milk.

Estimates by the USDA itself showed consumers would save between $186 million and $339 million a year. But the USDA did not respond until April 1981 when it denied the petition, saying such a move would cause major changes in the dairy industry.

A source in the Office of Management and Budget says "The price support program raises the price of milk higher than it would be in a competitive market. It's not a good deal for consumers. Also, large government purchases further increase the (retail) price of milk substantially—to the tune of hundreds of million of dollars, if not billions."

The reason milk prices are a lightning rod for public criticism, AMPI's Anderson says, is because of milk's high profile as a staple.

"It's the most visible food in America," he said. "That's why it has become the most political food in America. Everybody is concerned about the price of milk because they buy it every week."

"It's easy to say dairy farmers are ripping off the public, the government shouldn't be in the program, we'd save billions of dollars if we didn't have this price support program, co-ops and federal orders are causing consumers to pay more, all of that," Anderson said.

"But when you really get right down to it, I think dollar for dollar, we've got a situation here that has produced a product that is good for consumers, that they want, that they expect to be available fresh."

(Reprinted from the St. Petersburg Times, June 3, 1982)

Article #9: Natural Foods by Patrick Malone

They Refer to them as 'Healthy,' But some are Actually Hazardous

Knight-Ridder Newspapers

Some natural foods that are supposed to make you healthy could instead send you to the hospital, medical researchers are discovering.

Scientists browsing through health food stores across the country are finding a cornucopia of unsafe—even illegal —herbs, barks, roots, seeds and other substances plucked from nature.

"This idea of just going and eating plant extracts is very bad," says Dr. Joseph Davis, chief medical examiner of Dade County. "There is a whole host of problems."

New clinical reports of deaths and serious illness are forcing a second look at suddenly hip herbal teas, tonics and folk nostrums. Hospitals have reported health food victims from New York to Colorado.

Plants as common as alfalfa and as exotic as devil's claw root, as harmless as parsley and as dangerous as apricot kernels are sold in health food stores with no warnings about their potential side-effects.

Vomiting, diarrhea, muscular weakness, hallucinations, rashes, severe allergic reactions, high blood pressure and death—all have been linked in recent medical journal reports to medicinal herbs found on health food store shelves.

Based on her 15 years of researching herbal teas from South America to South Carolina, Dr. Julia Morton of the University of Miami is convinced that cancer of the esophagus can be caused by drinking too many beverages rich in mouth-puckering tannin.

That includes teas as unusual as bayberry and as common as Lipton, as well as dry red wine. The tannin-cancer link remains controversial.

Not so with some other products, whose dangers are as unimpeachable as their naturalness.

State and federal agencies charged with protecting the public from hazardous foods and drugs admit they can't keep them all off store shelves.

"There are lots and lots of things out there that shouldn't be there," says Joseph Perret, a consumer safety officer at the U.S. Food and Drug Administration (FDA).

Examples:

Apricot kernels — Rich in Laetrile, apricot kernels are considered illegal by the FDA when sold in health food stores. The FDA has seized tons of the kernels, which have killed at least three Americans by cyanide poisoning.

Mistletoe tea — Reputed in ancient times to be a remedy for epilepsy, mistletoe contains a poison similar to cobra venom. Children have died from eating mistletoe berries. So have mice sipping mistletoe tea in a university laboratory. The FDA seized a shipment of mistletoe tea two years ago as unsafe.

Pokeweed root — Sold as a powder in health food stores, touted for a variety of medicinal uses pokeroot also has killed children. The poison it contains also can cause diminished breathing and an inflamed digestive tract.

Sassafras bark and calamus — Both banned by the FDA in foods, they are known to contain cancer-causing chemicals. They can be bought in health food stores or ordered by mail from one of the country's eight major herb wholesalers, such as Green Mountain Herbs of Boulder, Colorado.

Other health food items are legal because scientific research about their benefits or harms is scanty. Still others are safe if used properly, but food regulations forbid labeling that gives any food a medicinal ring.

Sometimes the distinction between a food and a drug is invisible. That has enabled a substance like apricot kernels to slip through the holes in the regulatory net.

It is true with other plant products as well. As long as something is sold with no advice on how it can help or harm medically, it is legally a food.

The irony for the fledgling herbal industry rests on this thin legalistic line between food and drug. The word "drug" itself comes from a German word meaning "to dry," as in drying plants.

"We're in a twilight zone," says Mark Blumenthal, head of Sweetheart Herbs of Austin, Texas, and president of the Herbal Trade Association. Blumenthal, a 32-year-old vegetarian, started with a partner selling ginseng root out of a car trunk five years ago and now runs a $1 million annual business.

Reclassifying medicinal herbs as prescription drugs would ruin the herbal industry, insist suppliers such as Blumenthal. At last estimate of the Pharmaceutical Manufacturers Association, a new substance requires $50 million and nine years to reach pharmacies as a drug.

In its own defense, the herbal industry will ask the FDA to set toxicity standards and organize a research program to gather scientific knowledge about medicinal plants forgotten since the rise of the modern drug industry.

Already, industry researchers have scoured thousands of chemical and botanical journals to cull what little is known about the hundreds of herbs now sold.

Soon the Herbal Trade Association will issue its first policy statement against one of its products, pokeweed root, advising that it not be taken internally.

Article #10: Plant Products And Effects by Patrick Malone

Knight-Ridder Newspapers

Here is a list of some plant products sold in health food stores and their potential harmful effects:

Apricot kernels

Contain amygdalin, otherwise known as Laetrile. Hydrogen cyanide is released when swallowed. Can cause severe headaches, vomiting, weakness, disorientation and death.

Pennyroyal oil

Supposed to be used as a flea dip but often not labeled as such. Killed a young Colorado woman and caused sickness in two other women who took it trying to induce abortion. Center for Disease Control in Atlanta is investigating.

Juniper berries

Irritate digestive tract.

Buckhorn bark, senna leaves, yellow dock root, jalap root, aloe leaves

All powerful laxatives that can cause diarrhea.

Shave grass or horsetail

Contains nicotine. In grazing animals has caused loss pf appetite and muscular control, diarrhea, labored breathing, convulsions, coma and death.

Burdock root tea

In one case, doctors reported a person drank half a cup and experienced blurred vision, dry mouth, inability to urinate and hallucinations. Other common plants with euphoric or hallucinogenic effects when smoked or drunk in tea include catnip, juniper, lobelia and wormwood. Lobelia can be fatal.

Camomile

Can cause severe allergic reactions in persons allergic to ragweed, asters or chrysanthemums. Goldenrod, marigold and yarrow tea also should be avoided by people with such allergies.

St. John's wort

Can produce a bad skin rash in conjunction with exposure to sunlight if drunk as a tea.

Sassafras

It was banned by FDA in 1976 but now is considered possibly okay as a tea.

Devil's Claw Root

Should be avoided in pregnancy; has properties similar to the hormone that induces labor.

Ginseng

Can cause swollen and painful breasts, also high blood pressure with regular use of large amounts (several grams a day).

Tonka beans

Contains coumarin, banned by FDA as food additive; sold in health food stores to fix scent of sachets and potpourris. Caused liver damage and growth retardations when fed to animals.

Snakeroot, mandrake root

Sometimes sold as ginseng. Both considered poisonous. Mandrake root contains a hypnotic similar to belladonna. Snakeroot contains reserpine, which causes lowered blood pressure and "possibly severe depression.

Arnica or wolfsbane

Can produce violent digestive inflammation, muscular weakness, collapse and death.

Blood root

Causes vomiting; overdose can be fatal.

Mistletoe

Berries are the most poisonous and have killed children. Leaves and stems used in tea also contain toxins that in large doses can cause muscle and blood vessels to contract, leading to shock and heart arrest.

In fairness says Rob McCaleb, lab director at Celestial Seasonings, several points need to be made in herbs behalf:

Practically any medicine is toxic in large enough doses. The same is true for medicinal herbs. Foods can be toxic too: Prune juice is a well-known laxative, though not labeled as such, and it can produce diarrhea just like drinking senna leaf tea.

But Celestial Seasonings is cautious. The largest herbal tea company with $10 million annual trade, it

sells no teas with banned or suspected substances.

The problem, as the industry sees it, is educating the public in sensible use of herbs, most of which are harmless and inexpensive.

The education process will take years. The first problem is that many of the books and pamphlets sold in health food; stores contain only erratic information about potential harms alongside lengthy statements extolling unproven claims of medicinal benefit. Very few books even contain *specific* instructions on how one would use the plant, i.e., the part(s) of the plant to use, how to prepare the plant, how much or how often one would use it, etc. One does not get the complete story when using just one source (or even several) for information. A book might list a number of herbs as being "good for the heart," but if these herbs were researched more extensively, one would find that some are so potent that they actually affect the heart's *rhythm*. Most books don't go into such detail, but obviously, casual or misguided use of such herbs is *dangerous*.

Health food store operators are often little help. Most, like Peggy Childers, district manager for the National Health Food Central chain in Miami, are careful to say: "We do not prescribe in any way, shape or form."

The potential danger of some plant extracts currently sold in health food stores is in dispute.

Ginseng is the best example. One of the hottest sellers in health food stores, it is reputed as an aphrodisiac and a general health tonic and stimulant.

Doctors use it in China to regulate blood pressure and blood sugar, but its only accepted medical use in the United States is in skin ointments. An estimated 5 million to 6 million Americans take ginseng regularly.

A new study by Dr. Ronald Siegel of UCLA found that long-term heavy ginseng users suffered frequently from nervousness, sleeplessness and, most significantly, high blood pressure.

The herbal industry believes those problems were caused more by the caffeine in beverages consumed along with the ginseng.

But no one can say for certain, and even an herbalist such as McCaleb says that studies of the benefits of ginseng have found, in most charitable phrasing, that it has "enhanced placebo effect."

Two other popular herbal items sold in health food stores are camomile tea and alfalfa tea. The herbal industry believes both to be completely safe.

But camomile can produce severe allergic reaction to those allergic to ragweed, and alfalfa has caused problems with barnyard animals: bloating in cattle, retarded growth in chicks, decreased egg production by hens.

The Medical Letter, a newsletter that evaluates drugs for physicians, published in its April 6 issue the most comprehensive listing to date of the dangers of plant products sold in health food stores.

Dr. Walter Lewis of Washington University in St. Louis, a contributor to the article, is bothered by public ignorance of the hazard and upset by the FDA's lack of action.

"They're just absolute idiots," he says of the FDA.

African tribes who use a substance like devil's claw root, reputed to induce labor in pregnant women, control its use better than the U.S. government, which allows its unrestricted sale, he says.

Licorice root in small doses makes a tasty flavoring but in large amounts can cause heart failure. An ulcer drug derived from the root is available by prescription in Europe but not in the United States because of its side-effects.

"The irony," says Lewis, "is that you and I can walk into a health food store and get all we want, completely uncontrolled, and a physician can't dispense it."

Tannin, a substance found in wine and tea, can soothe a sore throat. But the University of Miami's Julia Morton found an atypical incidence of cancer of the esophagus in Curacao, coastal South Carolina and other areas whose inhabitants consumed large amounts of beverages high in tannin. The British put milk in their tea because it neutralizes tannin.

Tannin has produced cancer in animals when injected, but no studies have been completed on its effect when drunk by laboratory animals. The National Cancer Institute does not classify it officially as a carcinogen and has no lab tests scheduled.

Morton believes tannin is no danger if consumed prudently. Still, she has stopped drinking tea in the last few months. Her favorite beverage is water.